INDEX

THE ENGINEERING AND MINING JOURNAL.

VOLUME LXXVII.

JANUARY TO JUNE

1904

THE ENGINNERING AND MINING JOURNAL
INCORPORATED
261 Broadway, NEW YORK

THE ENGINEERING AND MINING JOURNAL

VOLUME LXXVII. JANUARY TO JUNE 1904

INDEX TO GENERAL SUBJECTS

(Illustrated Articles are Designated by an Asterisk; Names of Books are in Quotation Marks.)

A

"Aachen Technical High School Laboratory Work in Metallurgy and Electro-chemistry" 526
Abyssinia, Gold.....6, 918
Accident from Breaking of Mine Cage Rope 937
"Accident Bulletin, Interstate Commerce Commission" 366
Accidents, Coal Mining in Alabama, 99, 459, 664
Accidents, Coal Mining in Illinois..... 52
Accidents, Coal Mining in Indiana..... 336
Accidents, Coal Mining in Pennsylvania. 120
Accidents, Coal Mining in West Virginia 53, 765
Accidents, Copper Mining in Michigan... 79
Accidents, Fatal in Metal Mining in U. S.....79, 119
"Accidents in Mines. Office at Frameries" 526
Accidents, Mining in Colorado.....80, 120
Accidents, Mining, Due to Fire-Damp Explosion from Rotten Timbers..... 390
Accidents, Mining in Great Britain..79, 204
Accidents, Mining and the Law..... 837
Accidents, Mining in Missouri..... 119
Accidents, Mining in Montana..... 79
Accidents, Mining from Overwinding.228, 231
Accidents, Mining, Statistics of..... 108
Accident, Statements Made After Not Part of Litigation Record.....1,053
Accident, Unusual at Bingham, Utah, 871, 874
Accumulators, Charging, Mallet & Parent's Pat..... 330
Acetylene Gas Generator, Atkins' pat.. 410
Acetylene Gas Generator, Flugstad's Pat. 410
Acetylene Gas Generator, Green's Pat.. 974
Acetylene Gas Generator, Montel's Pat. 934
Acetylene Gas Generator, Rosenbluth's Pat. 410
Acetylene Gas Generator, Tatter's Pat. 409
Acetylene Gas Machine, Anderegg & Sell's Pat..... 974
Acheson's Pat. Making Carbon Articles. 130
Acid Consumption by U. S. Government. 279
Acid, Homologous Propiolic, Making, Moureu's Pat..... 169
Acid Market.....Weekly
Acid Market in 1903..... 57
Acid Plant, U. S. Government..... 279
Acid, Sludge, Utilization in Russia..... 550
Acid Waste, Treating, Hemingway's Pat. 210
Actinium 362
Actinolite Production, Canada.....393, 648
Adams, Randolph..... 871
Adams's Pat. Miner's Check-Holder.... 369
Adelsperger's Pat. Separator..... 170
"Adirondack Forest Fires in 1903"..... 729
Adirondacks, Graphite in..... 844
Adrian Furnace, Pa., Improvements in..1,041
Adventure Con. Copper Co., Mich., Report 528
*Aerial Tramway Brake..... 728
Aerial Tramway in Spain..... 678
Aetna Con. Quicksilver Mfg. Co., Cal., Report 527
Africa, Coal Mining..... 51
Africa, Copper Production..... 794
"Africa, Occurrences of Copper Ores"..1,050
Agate 634
Agglomerating Compound, Giglie & Zaouche's Pat..... 250
*Agitator, Trapezoidal, for Slimes..... 241
Agramonte's Gas-Retort 614
Agramonte's Pat. Hydrocarbon Gas Generator and Burner..... 974
Agriculture on Witwatersrand..1,031, 1,049
Aiken's Pat. Converting Mattes..... 530
Aimes's Pat. Bituminous Pavements.. 853
Air, Compressed, vs. Electricity..... 486
Air Compressor, Alexander's Pat.....1,054
*Air Compressor, Causes of Explosions in 686, 995
Air Compressor, Cox's Pat..... 774
Air Compressor, Dean's Pat..... 410
*Air Compressor for St. Louis Exposition 164
Air Compressor Governor, Saam's Pat. 410
Air Compressor, McCall's Pat..... 934
*Air Compressor, Sergeant's Pat..... 490
Air Compressor, Turbine..... 359
Air Compressor Unloading Device, Fairhurst's Pat..... 694
Air Compressor, Webber's Pat..... 129
*Air Compressor, Williams' Pat..... 694
*Air, Extracting Moisture from, for Blast Furnaces and Converters..... 574
Air Lift for Fluids, Harris's Pat., 734, 774, 814
Air Pump, Condensing, Wilhelmi's Pat. 773
Air Reheater, Daw's Pat..... 450
Air Valve for Oil-Tanks, Robinson's Pat. 1,054
*Air Washer for Compressors, Daw's.. 285
Akers, Wm. A., Montana Mining..... 41
Alabama, Bauxite Production..... 123
Alabama Coal for Louisiana..... 99
Alabama Coal for Mexico..... 499
Alabama, Coal Mine Foremen..... 139
Alabama, Coal Miners' Strike Impending 993
Alabama, Coal Miners' Wages.623, 784, 1,063
Alabama Coal Mining in 1903..... 52
Alabama, Coal Mining Accidents.99, 459, 664
Alabama, Coal Production..52, 99, 219, 260, 299, 419, 516, 943
Alabama, Ensley Steel Plant..... 399
Alabama, Gold and Silver Production.. 5
Alabama, Iron and Steel Shipments, 140, 824, 1,025
Alabama Iron Market in 1903..... 48
Alabama, Iron Production..... 48
Alabama, Iron Stocks..... 140
Alabama, Pyrite 502
Alaska, Coal Production..... 75
Alaska, Geological Survey of..... 766
Alaska, Gold and Silver Production.....5, 75
Alaska, Gold Dredging on Stewart River 107
*Alaska Mexican Gold Mg. Co., Report. 651
Alaska Mining Claim, Possessory Title 128
*Alaska, Mining Industry..... 75
Alaska, Oil Deposits..... 78
"Alaska, Oil Fields of"..... 930
*Alaska Ore Deposits, Map of..... 75
Alaska, Placer Mining..... 751
Alaska, Progress in..... 68
"Alaska, Southeastern and Part of British Columbia; Showing Award of Alaska Boundary Tribunal"..... 570
Alaska, Sulphur..... 262
Alaska Treadwell Gold Mg. Co., Low Milling Costs of..... 715
*Alaska United Gold Mg. Co., Report.. 692
Alexander's Pat. Air Compressor.....1,054
"Alexandria, S. D., Geologic Atlas," 366, 610
Alford & Smythe's Pat. Amalgamator.. 90
Algeria, Copper Sulphate Consumption.. 461
"Algeria, Geology of"..... 406
Algeria, Phosphate Mining..... 461
Algeria, Phosphate Shipments..102, 221, 542, 626, 946
Algeria, Phosphate Trade..... 569
Alkaline Silicate Solutions, Evaporating, Reim's Pat..... 893
*Allard Screen 317
Allegheny Coal Co. Mine Explosion.... 149
*Allen's Pat. Mine Car..... 529
*Allen's Pat. Sampler..... 490
Allen's Pat. Separator.....490, 1,053
Allen's Pat. Welding Iron and Steel.. 894
*Allis-Chalmers Gold Dredge for Heavy Work 525
*Allis-Chalmers Krause Atmospheric Stamp 769
Allison's Pat. Coal Loader..... 89
Allis's Pat. Reducing Metal Bars into Sheets 654
Allouez Mining Co., Mich., Report..... 661
Alloy, Guhrs' Pat..... 854
Alloy, Kneppel's Pat..... 813
Alloy, Prescott's Pat..... 734
Alloys, Schukert & Co.'s Pat..... 130
Alloys, Duty on.....1,013
Alloys and Minor Metals: Prices.....Weekly
Alpamina Mine, Peru..... 831
Alpine Mine, Nev..... 891
*Alsek Mining District, Northwest Territory 766
Alston's Pat. Stone Sawing Machine.. 330
"Alternating Currents"..... 366
"Alternating Current Transformer".. 890
*Althouse, H. W., Norton Coals of the Big Sandy Basin..... 235
Alum Discovery, Colorado..... 422
Alumina, Melting Point at High Temperature 10
Alumina, Method for the Direct Determination of..... 357
Alumina, Producing Pure, Societa Romana Solfati's Pat..... 370
Alumina, Purifying, Keogh & Broughton's Pat..... 450
Alumina, Some Sources of Error in Estimation of..... 688
Aluminum Alloy, Montby, Frezel & Coppee's Pat..... 130
Aluminum as Conductor of Electricity.. 874
Aluminum in 1903..... 20
Aluminum-Copper Alloys, Jacobsen's Pat. 1,014
Aluminum Exports, U. S..... 3
Aluminum, Hardening, Sorensen's Pat. 170
Aluminum Production, U. S.....3, 4, 20
Aluminum Solder, Ellis & Flanigan's Pat. 1,054
Aluminum Solder, Ellis's Pat..... 894
Aluminum Solder, Trezel's Pat..... 854
Aluminum Sulphate Drying, Perry & Schwache's Pat..... 90
Aluminum Sulphate for Fireproofing.... 395
Aluminum Sulphate for Preserving Wood 1,003
Aluminum Sulphate Making, Schwaha's Pat. 369
Aluminum Sulphate Making, Spence's Pat. 490
Aluminum Sulphate Treating, Keogh & Broughton's Pat..... 654
Aluminum Sulphide and Aluminum Alloys, Making, Onda's Pat..... 893
Alzugaray's Copper-Silver Process..... 229
Alzugaray's Pat. Crucible Furnace..... 654
Alzugaray's Pat. Making Steel..... 250
Alzugaray's Pat. Ore Treatment....210, 330
"Amador County, Cal., Register of Mines and Minerals"..... 246
Amalgamating Pan, Van de Valk's Pat. 130
Amalgamating Plates, Restoring..... 852
Amalgamation on the Rand..... 841
Amalgamator, Alford & Smythe's Pat.. 90
Amalgamator and Concentrator, Lanius's Pat. 529
*Amalgamator and Concentrator, Rossman's Pat..... 170
Amalgamator, Hall's Pat..... 290
Amalgamator, Nelson's Nat..... 329
"Amalgames et leurs Applications"... 570
Amber, Dredging, for on Baltic Sea.... 794
"American Chamber of Commerce in Paris, Year-Book"..... 770
American Institute of Mining Engineers, Atlantic City Meeting..... 310
American Institute of Mining Engineers, Baltimore Meeting.....190, 230
American Institute of Mining Engineers, Lake Superior Meeting.....724, 997
*American Institute of Mining Engineers, New President—James Gayley 470
American Institute of Mining Engineers at St. Louis Exposition..... 641
American Institute of Mining Engineers, "Transactions"..... 446
American Iron and Steel Association... 87
American Iron & Steel Mfg. Co., Report 407
"American Law Relating to Mines and Mineral Lands"..... 650
"American Meter Practice"..... 446
American Mg Co., Wyo..... 41
American Mining Congress, 655, 775, 831, 895, 935, 1,055
American Mining Congress, Value of... 992
American Mining Engineer, Status of.. 310
American Mining Machinery in Russia. 514
American Security & Trust Co..... 269
American Society of Civil Engineers and the Engineering Building..... 284
American Society of Mechanical Engineers, "Transactions"..... 207
American Steel Rails for Canada..... 227
"American Street Railway Manual"... 610
Amethyst 677
Aminoff's Pat. Charring and Dry Distillating Apparatus..... 90
Ammonium Nitrate Making, Mills's Pat. 490
Ammonium Sulphate, Duty on..... 342
Ammonium Sulphate Exports, Great Britain 102, 263
Ammonium Sulphate in Germany..... 846
Ammonium Sulphate Imports, New York 745
Ammonium Sulphate Market.....Weekly
Ammonium Sulphate Market in 1903.... 58
Ammonium Sulphate Production, Great Britain 263
Ammonium Sulphate Production, U. S. 394
Amortization 875
Anaconda, Mont., Experiments with Reverberatory Furnaces at..... 716
Anderegg & Sell's Pat. Acetylene Gas Machine 974
Anderson's Pat. Concentrator..... 170
Anderson's Pat. Recovering Metals from Solutions 813
Anderson's Pat. Stamp Mill..... 934
Andrews's Pat. Dredge..... 773
Andrews's Pat. Ore Scraper..... 694
Annealing Apparatus, Uehling's Pat... 894
Annealing and Tempering Metal, Reichhelm's Pat.....1,014
Anode, Blackman's Pat..... 974
Anthracite. (See under Coal.)
Antimony in 1903..... 18
Antimony, Imports and Exports, U. S., 3, 18, 223, 383, 544, 747, 907
Antimony Industry, Japan..... 674
Antimony Market and Prices.....Weekly
Antimony Production, U. S.....3, 4, 18
Antimony Smelting..... 161
Anton's Pat. Miner's Lamp..... 574
Appleyard & Cranfield's Pat. Crucible Lid 974
*Arcturus Mine Concentrator..... 960
*Arentz, Samuel S., South Dakota Mining 45
Argall, Philip, Treatment of Sulpho-Telluride Ores 351
Argentina, Copper Production..... 794
Argentina, Gold Production..... 6
*Argentine Mines, Colo., Diagram of... 125
Argon 123
Arizona, Arsenic Discovery..... 74
*Arizona, Clifton District..... 679
*Arizona, Congress Mines..... 999
*Arizona Copper Co.'s Smelter..... 679
Arizona, Cyanide Process in..... 34
Arizona, Diamond Drilling in the Warren Copper District..... 888
*Arizona, Faulting in the Globe District 802, 915
*Arizona, Globe District..... 839
Arizona, Gold and Silver Production... 5
Arizona, Labor Conditions in..... 510
*Arizona, Mining in 1903..... 35
Arizona Reclamation Co., Ariz..... 454
*Arizona, Silverbell Camp..... 639
Arizona, Story from.. 1,011
*Arizona, Tombstone Mines..... 919
Ariwaca District, Ariz., Mining..... 36
*Arkansas, Bauxite Mining..... 606
Arkansas, Bauxite Production..... 123
Arkansas, Coal Production..... 52
Arkansas, Manganese Ore.....1,058
"Arkansas, Phosphate Rocks of"..... 610
Arkansas River, Pollution of..... 615
Arkansas Slates.....1,038, 1,058
Arkansas, Zinc.....1,058
Armbruster's Pat. Chlorination Barrel.. 90
Armbruster's Pat. Making Pigment..... 289
Armbruster & Morton's Pat. Making Pigment 694
Arnold, Horace L., "Factory Manager and Accountant"..... 326
Arnold's Pat. Explosive Compound..... 694
Arsenic and Copper Alloys..... 714
Arsenic Discovery, Arizona..... 74
Arsenic Exports, Canada..... 394
Arsenic Imports, U. S.....57, 221
Arsenic Market in 1903..... 57
Arsenic Market and Prices..... 141
Arsenic Production, Canada.....393, 648
Arsenic Production, Great Britain..... 430
Arsenic Production, U. S.....4, 74
Arsenic in Spain..... 965
Arsenic from Washoe Smelter Fumes, 276, 1,055
Arsenic, Yellow..... 567
"Asbestos" 326
Asbestos 812
Asbestos, Canada.....393, 394, 800
Asbestos Market..... 101
Ashcroft's Pat. Electrolytic Cell..... 210
Ashcroft's Pat. Sodium Separation by Electrolysis 130
Ash's Pat. Still..... 634
Asia, Central, Coal and Petroleum in... 565
Aspen, Colo., Silver Production..... 38
Aspen, Colo., Smelting Charges.....291, 331
Asphalt in the Dead Sea..... 576
Asphalt Deposits, San Valentino, Italy.. 607
Asphalt Imports and Exports, U. S., 285, 381, 542, 745, 945
Asphalt Lands in Indian Territory..... 246
Asphalt Mines, Colombia..... 607
Asphalt Pavement, First..... 594
Asphalt Pavement, Amies's Pat..... 853
Asphalt Stone, Artificial, Rubitschung's Pat. 89
Asphalt, Venezuela 218, 221
Aspin & Erickson's Pat. Bucket..... 813
Assayers, Chemists and Metallurgists, Western Society for..... 878
Assessing Mines in California.....1,015
Assessments .....Weekly
Assessments in 1903..... 63
Assessment Work, Law on.....127, 249, 528
Associated Security Co., N. Y., Plan of 751
"Assuan Reservoir and Lake Moeris".. 610
Atha's Pat. Reversing Valve..... 450
Atkins's Pat. Acetylene Gas Generator. 410
Atkins's Pat. Electrode.....410, 450
Atlantic Mining Co., Mich., Report.... 572
*Atlin District, B. C..... 523
Altman, Colo. 39
Attorney, Liability of Mining Company to 488
Atwater, Richard M., Jr., Some Aspects of Mining Finance..... 153
*Auchincloss Colliery 726
"Augustus B. Walvin," Large Ore Carrier 686, 855
Austen, Peter T., "Chemical Factor in Human Progress" 166
Australia, Anthracite Coal in..... 568
Australia, Coal Mining Machines..... 686
Australia, Copper Production.....8, 794
Australia, Eastern States of..... 31
Australia, Gold Exports.....7, 142, 263
Australia, Gold Shipments..... 108
Australia, Iron in..... 881
*Australian Bush, Mining in..... 33
Australia, New Patent Law in..... 114
"Australia and New Zealand, Statistical Account of" 848
"Australian Institute of Mining Engineers, Proceedings".....1,050
Australian Mines, Management of..236, 637, 1,005
Australian Unit of Water Measurement. 592
Australia, Secret Reserves in Gold Mining 761
Australia, Tin Production..... 18
Austria-Hungary, Bank Statement....Weekly
Austria-Hungary, Coal Production....51, 558
"Austria-Hungary Coals" 690
Austria-Hungary, Copper Production.... 794
"Austria-Hungary, Geological Yearbook" 1,050
Austria-Hungary, Gold Production..... 6
"Austria-Hungary, Industrial Statistics" 1,050
"Austria-Hungary, Labor in".....729, 770
"Austria-Hungary, Mine Inspection in". 729
Austria-Hungary, New Coal-Fields..... 280
Austria-Hungary, Quicksilver Production 246
Austria-Hungary, Zinc Production..... 308
Automobile as a Help to Mining..... 687

B

Babu, L., "Metallurgical Products" 446, 526
Bach's Pat. Making Fire-Brick.....1,014
Backlund & Burman's Pat. Charging Blast Furnaces..... 734
Badische Anilin & Soda Fabrik's Pat. Making Hyposulphite of Soda..... 90
Bagg, Rufus M., Secondary Enrichment in the Santa Rita District..... 153
*Baggaley & Garretson's Pat. Slag Furnace 853
Bailey, G. E., "Saline Deposits of California" 406
Bailey & Wild's Pat. Concentrator..... 290

131770

Bailey's Pat. Rock Breaker and Pulverizer ... 369
Baily, F. G., on Osmium Lamps ... 682
Bain, H. Foster, "Lead and Zinc Deposits of Illinois" ... 1,011
Bain, H. Foster, Mining Costs at Cripple Creek, Colo ... 70
Bain, H. Foster, Recent Literature of Geology of Lead and Zinc ... 365, 770, 1,011
Bain, H. Foster, Recent Literature on Geology of Coal ... 848
Bain, H. Foster, Recent Literature on Geology of Fuels ... 445, 570
Bain, H. Foster, Recent Literature on Geology of Oil and Gas ... 930
Baker's Pat. Forging ... 530
Baku Oil-Field, Boreholes in ... 794
Baku Oil-Field Fire ... 604
Baldwin & Ticknor's Pat. Conveyor Tripper ... 773, 774
Baldwin's Pat. Chute ... 773
Balia Lead Mines, Turkey ... 274, 691
Ball, Sydney H., "Geology of Miller County, Mo." ... 689, 770, 810
*Ballarat, 'Indicator' Vein ... 119
*Ballow Boiler Feed Water Heater ... 1,009
"Baltimore Conflagration" ... 970
Bamberger-De Lamar Mine, Nev ... 725
Bancroft, Geo. J., Bureau of Mining ... 151
Bancroft, Geo. J., Mine Equipment and Ore Reserves ... 995
Bancroft, George J., Use of Metallic Currency ... 527
Bancroft, Walter D., "Electrolytic Copper Refining" ... 485
Banks, Charles S., "Report on Insects of the Cacao" ... 890
Bank Statements ... Weekly
Baraboo Iron Ore Deposits, Wis ... 875
Barium ... 328
Barium Sulphate Imports, New York ... 221
Barium Sulphate Production, Quebec ... 800
Barker's Pat. Melting Furnace ... 210
"Barnsboro-Patton Coal Field of Central Pennsylvania" ... 848
Barrett's Pat. Oil Well Swivel-Wrench ... 89
*Bartlett, C. O., & Snow Co., Triumph Digger ... 524
Barton, Eugene H., Mining and Milling in the Mojave Desert ... 154
Barytes ... 488
Barytes, Duty on ... 812
Barytes Production, Canada ... 393
Barytes Production, Great Britain ... 430
Barytes Production, Newfoundland ... 969
"Base, Movable" ... 809
Baskerville, Charles M., Elements: Verified and Unverified ... 282
Baskerville, Charles M., Phosphorescent Thorium Oxide ... 203
Bates's Pat. Generating Gas ... 128
Bathhurst, F. H., Secret Reserves ... 761
Battery Foundations ... 877, 1,036
Battery Steam-Guide, Martin's Pat ... 330
Baum, F. G., "Alternating Current Transformer" ... 890
Baum, I., "Electrolytic Copper Refining" ... 485
Baume's Pat. Ore Dryer ... 130, 934
Bauxite ... 594, 809
*Bauxite in Arkansas ... 606
Bauxite Production, Alabama ... 123
Bauxite Production, Arkansas ... 123
Bauxite Production, Georgia ... 123
Bauxite Production, Great Britain ... 430
Bauxite Production, U. S ... 4, 123
Baxeres, J., Revolutionary Metallurgy-Metalia, Ltd. ... 447
Baxter's Pat. Making Fireproofing Solutions ... 973
Baxter's Pat. Ore Sorter ... 934
Bayley, William Shirley, "Monograph of the Menominee Iron-bearihg District, Mich." ... 650
Beadle, A. A., Electric Smelting of Complex Sulphides ... 479
Beam Process ... 148
*Beam's Pat. Coke-Oven ... 854
Beam's Pat. Ore Treating Furnace ... 973
Beane's Pat. Sinking Oil-Well Castings ... 813
Beardsley, G. F., Pyrite Smelting ... 232, 1,036
Beardsley's Pat. Gas Apparatus ... 169
Bechtel's Pat. Brick Cutter ... 1,014
Becht's Pat. Reducing Mill ... 693
Becker, H., "Electro-Metallurgy of Alkali Metals" ... 446
*Beech Creek Coal & Coke Co.'s Somerville Mines ... 120
Beeler, Henry C., Bureau of Mining ... 191
*Beeler, Henry C., Wyoming Mines ... 40
Beeler, Henry C., "Wyoming Mines and Minerals" ... 610
Beeton & Wardell's Pat. Miners' Pick ... 530
Beghoefer's Pat. Converter ... 573
Belcher, Edward A., Ground Sluice Decision in California ... 367
Belgium Bank Statement ... Weekly
Belgium, Campine Coal-Field ... 720
Belgium, Coal and Coke Imports ... 240
Belgium, Coal Production ... 51
Belgium, Iron and Steel Production ... 241, 365
Belgium, Zinc Production ... 308
*Bell, B. T. A ... 390
Bell, B. T. A., "Journal of the Canadian Mining Institute" ... 730
Bell, Robert N., "Report on Mining Districts of Idaho" ... 446
Bement, A., "Economical Burning of Coal Without Smoke" ... 650
Bendigo District Gold Mining and Dividends ... 951
Bendigo Mine, Most Successful ... 478
Benjamin's Pat. Pulverizer ... 854
Benker's Pat. Roasting Furnace ... 210
*Bennett, Jas. C., Cast-Iron Turn-Table ... 195
Bennetts & Jones's Pat. Slag Car ... 774
Bennett's Pat. Copper Pouring Spoon ... 409
Bentel's Pat. Manufacturing Tubes ... 530
*Berger, W. F., Bauxite in Arkansas ... 606
Berkey, Charles P., Mineral Resources of the Uinta Mountains ... 841
Bermont's Pat. Producing Hydrated Zinc Sulphide ... 290
*Bertha Mineral Co., Magnetic Concentration of Zinc Ore ... 1,001
Bertrand & Vorbach's Pat. Tuyere ... 574
*Berwind-White Coal Mining Co., Eureka Collieries ... 879
Berzelium ... 203
Bessemer Converter in Basic Steel Making ... 399
*Bessemer Copper Converters ... 437
*Bessemer Medallist—R. A. Hadfield ... 794
Bessemer Smelting ... 353
Bessey's Process for Making Peat Fuel Briquettes ... 777
*Best, W. N., Science of Burning Liquid Fuel ... 771
Best's Pat. Furnace ... 934
Best's Pat. Lighting Miners' Lamps, 330, 410, 734, 854
Bethlen-Falva Iron & Steel Works, Electrically Driven Rolling Mill ... 518
Bewick, Moreing & Co., Mine Management ... 673, 872
Beyer, S. W., Iowa Coal Mining in 1903 ... 53
Biddison, Elmer G., "Ohio Mine Inspector's Report" ... 207
Bidtel's Pat. Magnesia Cement Composition ... 654
Bielefeldt's Pat. Priming Composition ... 289
Bif's Pat. Sheet Zinc Bending Machine ... 449
*Big Sandy Basin Coal-Field ... 235
Bigelow, S. Lawrence, Value of Research ... 874
Billet-Heating Furnace Feeding Device, Edwards's Pat ... 653
Billin's Pat. Steam Hammer ... 489
*Billy's Fault, Mex ... 642
Bingham, Utah, Mining Methods at ... 42, 760
*Bingham, Utah, New Mill of the Utah Copper Co ... 557
Bingham, Utah, Pyrite Smelting at ... 351, 433
Bingham, Utah, Unusual Accident at ... 871, 874
Birkinbine, John, "Manganese Ore Production" ... 526
Birmingham, Ala., Coal and Iron Markets ... Weekly
"Bisbee Quadrangle, Ariz., Geology and Ore Deposits of" ... 1,050
Bismuth, California ... 980
Bismuth Compound, Kalle & Co.'s Pat ... 894
Bismuth Discovery, Nevada ... 457
Bismuth Imports, New York ... 221
"Bitter Root Range and Clearwater Mountains, Mont., Mineral Deposits of" ... 649
Bituminous. (See under Coal.)
Bivert's Pat. Conveyor ... 128
Bivert's Pat. Tripper for Bucket Conveyors ... 128
Bjorling, Philip R., "Briquettes and Patent Fuel" ... 526
Black's Pat. Rock Breaker ... 1,053
*Black Hills Ores, Geological Position of ... 45
Blackett's Pat. Coal Borer ... 614
Blackman's Pat. Anode ... 974
Blackmore's Pat. Electrolytic Apparatus ... 814
*Blair Mines, Nev., Drinkwater Tunnel ... 759
*Blake-Knowles High Speed Pump ... 1,010
*Blake, William P., Mining in the Southwest ... 35
Blake, William P., "Tombstone and its Mines" ... 930
Bland's Pat. Elastic-Fluid Compressor ... 894
Blast, Drying, Gayley's Pat ... 90
Blast Furnace Air, Heating, Teichgraeber's Pat ... 130
Blast Furnace Bell Attachment, Mann's Pat ... 654
Blast Furnace Charging, Backlund & Burman's Pat ... 734
Blast Furnace, First, in South Africa ... 618
Blast Furnace Flue-Dust, Cyanide in ... 994
Blast Furnace Flue-Dust, Injury to Adjoining Property ... 508, 548, 573
Blast Furnace Gas and Hot Slag as Fuel ... 714
Blast Furnace Gas, Power from ... 846
*Blast Furnace, Hamfeldt's Pat ... 853
Blast Furnace of the Latest Type ... 1,041
*Blast Furnace, Pack's Pat ... 450
Blast Furnace Slag for Paving Blocks ... 309
*Blast Furnace Slags, Copper Losses in ... 395
Blast Furnace, Water Jacket, Garretson's Pat ... 814
Blast Furnace Water Jackets, Construction of ... 595
Blast Furnaces in Great Britain ... 205
Blast Furnaces, Large ... 633
Blasting Cartridge, Durham's Pat ... 129
Blasting Charges, Machine for Preparing, Trayssac's Pat ... 490
Blasting Compound, Tollner's Pat ... 694
Blasting in Wet Holes ... 674
Bleaching Powder Exports, Great Britain ... 705
Bleaching Powder Imports and Exports, U. S ... 57, 381, 542, 945
Bleaching Powder Market ... Weekly
Bleaching Powder Market in 1903 ... 57
Bleiweiss Verkaufskontor ... 874
Blodgett, James H., "Wages of Farm Labor in U. S." ... 126
Blower Fan, Stukes' Pat ... 90
Blower, Pneumatic, Gardiner's Pat ... 290
*Blower, Sturtevant New Hand ... 893
Blowing Engine, Reynolds's Pat ... 450
Blowing Engine Valve, Petsche's Pat ... 774
Blue John Mine, Eng., Early Workings ... 509
*Blue-Printing Machine, Electrical ... 485
Blumenberg's Pat. Sulphur Burner ... 130
Bodlander's Pat. Determining Carbonic Acid in Gases ... 290
Bohemia, Coal Production ... 553
Boileau's Pat. Crusher ... 773
Boiler Explosions in Great Britain ... 365
*Boiler Feed Water Heater, Home-Made ... 1,009
Bolen, George L., "Getting a Living" ... 246
Bolivia, Copper Production ... 794
Bolivia, Gold Production ... 6
Bolivia, Mining Opportunities in ... 447
Bolivia, Tin ... 244, 354
Bolle's Pat. Making Zinc Hydrosulphite ... 974
Boltwood, Bertram B., Analysis of Radio-Active Minerals ... 247
Boltwood, Bertram B., Radium in Uranium Compounds ... 756
Bone Ash, Melting Point at High Temperature ... 10
Bonnington's Pat. Concentrator and Amalgamator ... 774
Bonsall & Barnes's Pat. Removing Mine Timbers ... 330
*Booker's Pat. Quartz Mill ... 813, 814
Boracic Acid, Duty on ... 408
Borax Consolidated, Ltd., Report ... 572
"Borax Deposits of Death Valley and Mohave Desert ... 406
Borax-Glass, Duty on ... 613
Borax Imports, Great Britain ... 502, 1,026
Borax, Peru ... 461
Borchers, Wilhelm, "Aachen Technical High School Laboratory Work in Metallurgy and Electro-chemistry" ... 526
Borchers, Wilhelm, "Electro-Metallurgy" ... 570
Bore-Hole Plummet, Hillmer's Pat ... 410
Bore-Holes, Deep ... 528
Boring, Deep, Dettmer's Pat ... 814
Boring, Deep, Wolski's Pat ... 614
Borneo, Coal ... 206
Borneo, Gold Production ... 6
Borneo, Oil ... 604
Bort Trade ... 408, 572, 594
*Borton's Pat. Pulverizer ... 853
Boschke's Pat. Dredge ... 654
*Boss, Ira C., Cantilever Battery Frame ... 404
Boss, M. P., Battery Foundations ... 1,037
*Boss's Pat. Stamp-Mill ... 614
Boston Mining Stock Market ... Weekly
Boston Mining Stock Market in 1903 ... 61
"Boston News Bureau Record on Amalgamated and Comparisons with U. S. Steel" ... 88
Boston Quicksilver Mg. Co., Cal., Report ... 527
"Boston Transit Commission Report" ... 88
"Boulder Oil-Field, Colo., Structure of" ... 930
"Boulder Reef, W. A., Geological Map of" ... 286
Boutwell, J. M., "Iron Ores in the Uinta Mountains, Utah" ... 688
Boutwell, J. M., "Progress Report on Park City Mining District, Utah" ... 326
Bowen, H. P., Revolutionary Metallurgy ... 433
Bownocker, John Adams, "Occurrence and Exploitation of Petroleum and Natural Gas in Ohio" ... 930
Box's Pat. Power Driven Rock Drill ... 128
Brahen's Pat. Stone Cleaning Composition ... 489
*Brake for Aerial Tramways ... 728
Branner, John C., "Bibliography of the Geology, Mineralogy and Paleontology of Brazil" ... 485
Branner, J. C., "Phosphate Rocks of Arkansas" ... 610
Braungart's Pat. Stuffing Box for Gas Compressor ... 814
"Brazil, Bibliography of the Geology, Mineralogy and Paleontology of" ... 485
"Brazil, Mineral Resources" ... 207
Brazil, Diamond Mining in ... 893
Brazil, Gold Production ... 6
"Brazil, Mica" ... 729
"Brazil, Report on Auriferous Deposits of Palma, Mines Geraes" ... 689
*Brazil, Stamp-Mill Mortar in ... 71
Brazing Compound, Tichon's Pat ... 574
Breakall's Pat. Grinding Mill ... 410
Brearley, Harry, "Analytical Chemistry of Uranium" ... 88
Brewster County Quicksilver Deposit, Texas ... 160, 685
Brick Cutter, Bechtel's Pat ... 1,014
Brick, Hollow, for Mill-Building Construction ... 514
Brick-Kiln Furnace, Clark's Pat ... 210
Brick Machine, Cothran's Pat ... 1,054
Brick Machine, Cranp & Finch's Pat ... 369
Brick Machine, Helm's Pat ... 973
Brick Machine, Horton's Pat ... 329
Brick Machine, Oberdahn's Pat ... 170
Brick Machine, Venables's Pat ... 574
Brick Mould, Flood's Pat ... 169
Brick Production, Newfoundland ... 969
Brick Production, Ontario ... 648
Brick Production, Quebec ... 800
Brick Re-Press, Gerwig's Pat ... 973
Brimstone. (See under Sulphur.)
Brine, Pumping, Trantom's Pat ... 530
Brintzinghoffer's Pat. Fastening Device for Drill Bits ... 490
Briquette Binder, Hoffman's Pat ... 813
Briquette, Coal, Binders for ... 563
Briquette Machine, Jenkins's Pat ... 1,053
Briquette Making, Davidson's Pat ... 614
Briquette Making, Huffelmann's Pat ... 128
"Briquettes and Patent Fuel" ... 526
Briquetting Machine, Koneman's Pat ... 330
Briseis Tin Mines, Ltd., Tasmania, Report ... 1,012
*Bristol Thermometer-Thermostat ... 889
*Bristol's Recording Pressure Gauge ... 686
British Columbia in 1903 ... 24, 320, 833
*British Columbia, Atlin District ... 523
British Columbia, Chinese Labor in ... 695
British Columbia, Chlorination Process in ... 24
British Columbia Coal Mine Licenses ... 735
British Columbia, Coal Mining ... 133
*British Columbia Copper Co.'s Smelter ... 25
British Columbia, Copper Production ... 24
*British Columbia, Deep Sea Landing ... 35
British Columbia, Elmore Oil Concentration Process in ... 373, 576
British Columbia, Gold and Silver Production ... 6, 24
"British Columbia, Industrial Conditions" ... 207
British Columbia, Labor Law ... 656
British Columbia, Lead Bounty ... 532, 656
British Columbia, Lead Mining in ... 12, 452
British Columbia, Lead Production ... 24
British Columbia, Mineral Production ... 190
"British Columbia, Mines Report" ... 88
*British Columbia, Mining Litigation in ... 758
British Columbia, Osmiridium ... 230
British Columbia, Platinum ... 280
British Columbia Provincial Mining Associaton and the Mining Industry ... 958
British Columbia—Snowshoe Consolidation Details ... 162
British Columbia, St. Eugene Mine ... 966
British Columbia, Zinc Ores ... 844
British Guiana, Diamond Exports ... 138, 538, 701, 822
British Guiana, Gold ... 6, 138, 538, 701, 822
"British Imperial Institute Bulletin" ... 610
British Iron and Steel Institute, American Meeting ... 282, 547, 610
British Iron and Steel Institute "Journal" ... 326, 971
Broad, Wallace, Mining in Rhodesia ... 391
Broadwell's Pat. Extracting Gold from Rebellious Ores ... 410
Brock, R. W., Laboratory Equipment in Technical Education ... 595
Brock, R. W., on Lardeau District, B. C. ... 400
Brock, R. W., Original Native Gold in Igneous Rocks ... 511
Brock, R. W., Platinum in British Columbia ... 280
*Brock, R. W., Radio-Active Minerals ... 887
Brock's Pat. Explosive ... 734
Brockunier, S. H., Explosions in Air Compressors ... 995
Brockunier, S. H., Gold on the Saskatchewan ... 127
Broken Hill Proprietary Co.'s Pat. Leaching Vat ... 130
Bromine ... 794, 914
Bromine Industry in 1903 ... 56
Bromine Making, Dow's Pat ... 330
Bromine Production, Michigan ... 56
Bromine Production, U. S ... 56
Bromo-Cyanide Used in Kalgoorlie Gold-Field, W. A ... 31
*Brook, W. M., Alsek Mining District ... 766
*Brooks, Alfred H., Mining Industry in Alaska ... 75
Brossoit's Pat. Drill Repairing Machine ... 530
Brothers's Pat. Rock Drilling Machine ... 369
Brough, Bennet H., on Mining of Non-Metallic Minerals ... 631
Brower's Pat. Building Blocks ... 489
Brown, Horace F. and Roasting Furnace Litigation ... 712
Brown, M. Walton, Federation of Technical Societies in Great Britain ... 431
Brown, Nicol, "Organization of Gold Mining Business" ... 446
*Brown & Reynolds' Pat. Producing Iron Direct from Ore ... 813
Brown, R. Gilman, Mine Sampling ... 151
Brown, R. Gilman, Tailings Elevators ... 597
Brown, R. Gilman, Treatment Capacity and Ore Reserves ... 835
Brown's Pat. Miners' Lamp Holder ... 90
Brown's Pat. Stamp Tappet ... 1,054
"Brownsville-Connellsville, Pa., Geologic Atlas" ... 366, 570, 970
*Brunton Rock Drill Bit ... 724
*Brunton's Pat. Mine Timber ... 813
Buchanan, John F., "Foundry Nomenclature" ... 88, 809
Buchner's Pat. Reduction of Nitro Compounds ... 933
Bucket, Aspin & Erickson's Pat ... 813
Bucket, Davis's Pat ... 974
Bucket Dumping, McCaughey's Pat ... 90
Bucket Elevator, Dalton's Pat ... 574
Bucket Elevator, Hetzel's Pat ... 250
Bucket, Monroe's Pat ... 574
Bucket, Slocum's Pat ... 290
Bucket and Suction Dredge Combined, Andrew's Pat ... 773
Bucket Suspension Device, Foster's Pat ... 169
Bucket Suspension Device, Hayward's Pat ... 90
Buckley, E. R., "Geology of Miller County, Mo." ... 810
Buckley, E. R., on System of Keeping Records of Missouri Geological Survey ... 74
Buen, Amado, Pyrite Smelting ... 875
Building Block, Brower's Pat ... 489
Building Block, Hoffman's Pat ... 409
Building Block, Morrison's Pat ... 409
Building Block, Porten's Pat ... 974
Building Brick Industry, New in Idaho ... 735
Building Material Production, Canada ... 393, 648
Building, Modern Improvements in ... 1,032
Bulkheads, Mine, Note on Construction ... 483
Bumping Screen, King's Pat ... 974
*Bunker Hill & Sullivan Concentrating Mill ... 923
Bunker Hill & Sullivan vs. Last Chance Mg. Co., Idaho ... 912
Bunnell's Pat. Well Machine ... 1,054
*Burke Mine and Mill, Idaho ... 923
Burleigh, C. A., Electrolytic Treatment of Zinc Sulphides ... 876
Burnet County Lead Ore Deposits, Texas ... 364
Burns's Pat. Protecting Metals ... 653
Burrell, W., Investment in Mines ... 234
Burrough's Pat. Ore Separator ... 329
Burrow's Pat. Casting Metals ... 574
*Burrow's Pat. Converter ... 529
Burrow's Pat. Heater for Oil-Wells ... 694
Burrows, J. S., "Barnsboro-Patton Coal Field of Central Pennsylvania" ... 848
Burschell's Pat. Desulphurizing Gases ... 774
Bushler's Pat. Mine Car ... 490
Butler's Pat. Heater for Oil-Wells ... 854
"Butte County, Cal., Register of Mines and Minerals" ... 446
Butte Litigation, Montana ... 41

Butte Mines, Timber Used in..... 41
Butters's Pat. Precipitating Metals from Solutions 613
*Butte, View of..... 42
Butts, Charles, "Coal Mining Along the Southeastern Margin of the Wilmore Basin, Cambria County"..... 848
Byrnes's Pat. Drawing Articles from Molten Baths 209
*Byron N. White, vs. Star Mining Co., B. C. 758

C

Cableway, Miller's Pat..... 853
"Cacao Insects, Report on"..... 890
Cadmium Market and Prices.....Weekly
Cadotte's Pat. Case Hardening Compound 129, 694
Calaverite 350
Calcines, Analysis of..... 922
Calcining Apparatus, Kibler's Pat..... 973
Calcium Carbide.....289, 594
Calcium Carbide Making, Cowles' Pat.. 854
Calcium Carbide Making, New Method. 689
Calcium Carbide Production, Ontario.... 648
Calcium, Metallic.....1,034
Calcspar 954
Caldecott, W. A., "Development of Gold Extraction Method on Witwatersrand" 729
California, Assessing Mines in.....1,015
California, Bismuth..... 980
California, Coal Briquette Industry in, 631, 682, 935
California, Coal Consumption..... 180
"California, Copper Deposits of the Redding Region"..... 729
California, Cyanidation in..... 34
California, Debris Question....109, 251, 308, 367, 415, 451, 508, 548, 1,055
California, Dynamite Industry..... 291
California, First Gold Discovery..... 110
California, Forest Reserve Land..... 211
"California, Geology, Paleontology and Mineral Resources of".....526, 690
California, Gold Dredges in..... 834
California, Gold Dredging..38, 656, 816, 855, 895, 976, 1,055
California, Gold and Silver Production.5, 37
California, Ground Sluice Decision in.. 367
California, Hydraulic Mining in..92, 109, 251, 308, 367, 415, 451, 467, 508, 548, 613, 1,055
California, Hydraulic Mining, Gillette Bill on 251, 308
California, Lime Quarries..... 615
California, Magnesite Mining..... 491
California, Mineral and Metal Production 38
"California Mines and Minerals"..... 286
California, Mining Industry.....35, 37
California, Mining and Milling in the Mohave Desert 154
"California, Mining and Mineral Resources of Redding Quadrangle"..... 729
California, Mineral and Railroad Land in 411
California, Miners' Troubles in..... 411
California Niter Industry.....1,032
California Oil as Fuel for Steamers.... 678
California, Oil Consumption.....56, 100
California, Oil Industry..... 56
California, Oil Land Developing Cost... 56
California, Oil Land Leases..... 615
California, Oil Production.....656, 735
California, Origin of Placer Gold in.... 771
California, Palagonite in..... 634
"California Petroleum, Chemical Analysis of" 809, 810
California River Improvement Convention 776, 816
"California, Saline Deposits of"..... 406
California, Sulphur Deposits..... 422
California, Talc Mining..... 135
California, Tourmaline Deposits..... 93
California, Water Supply.....132, 531
Calkins's Pat. Cupel Making Machine... 370
Calkins's Pat. Prospector's Ore-Breaker 934
Calumet & Arizona Mining Co., Ariz., Report 612
Cameo, Finest 794
Cameron, William, "Mine Inspector's Report for Indian Territory"..... 287
Cammell, Laird & Co. on Quality of Steel Rails 872
Campbell, M. R., "Meadow Branch Coal Field of West Virginia"..... 848
Campbell, M. R., "Recent Work in Bituminous Coal-Field of Pennsylvania" 570
Campbell, M. R., "Reconnoissance of the Borax Deposits of Death Valley and Mohave Desert"..... 406
Campbell, W. D., "Geological Map of the Boulder Reef"..... 286
Campbell's Pat. Making Iron Pigments. 170
Campine Coal-Field, Belgium..... 720
Canada, Actinolite Production.....393, 648
*Canada, Alsek Mining District..... 766
"Canada, Altitudes in".....570, 689
Canada, Arsenic.....393, 394
Canada, Asbestos 393, 394
Canada, Barytes Production..... 393
Canada, Building Material Production.. 393
Canada, Bureau of Mines for..171, 672, 674
Canada, Cement Production..... 393
Canada, Chrome Ore Production..... 393
Canada, Coal and Coke Production...51, 393
Canada, Coal Exports..... 394
Canada, Coal on Government Lands.... 291
Canada, Coal Miners' Wages..... 3
Canada, Coal Mining.....736
Canada, Copper 8, 393, 394, 794
Canada, Corundum Production..... 393
Canada, Electric Iron Smelting Investigating Commission.....171, 187. 656
Canada, Feldspar Production..... 392
Canada, Fire Clay Production..... 393
Canada, Geodetic Survey for..... 171
Canada, Gold on the Saskatchewan.... 127
Canada, Gold and Silver Exports..... 394
Canada, Gold and Silver Production..6, 393
Canada, Gold Stealing Law..... 736
Canada, Granite Production..... 393
Canada, Graphite.....393, 394
Canada, Grindstones Production..... 393
Canada, Gypsum Production..... 393
Canada, Iron Ore Shipments.46, 84, 393, 394
Canada, Iron Production.....279, 393
Canada, Iron and Steel Tariff.....133, 977
Canada, Lead Bounty..25, 211, 656, 936, 1,017
Canada, Lead Exports..... 394
Canada, Lead Production..... 393
Canada, Limestone for Flux Production. 393
Canada, Manganese Ore Production..... 393
"Canada, Map of the Northwest Territories and Province of Manitoba".... 570
Canada, Mica.....393, 394
Canada, Mineral Production in 1903.388, 393
Canada, Mineral Water Production..... 393
Canada, Mining Dividends..... 63
Canada, Mining Machinery Imports..... 553
Canada, Moulding Sand Production..... 393
Canada, Natural Gas Production..... 393
Canada, New Mining Territory in..... 229
Canada, Nickel 393, 394
Canada, Ocher Production..... 393
Canada, Oil Bounty..... 977
Canada, Oil Land, Locating..... 656
Canada, Oil Production..... 393
Canada, Oil Tariff.....491. 776
Canada, Paint Industry.....342, 531
Canada, Peat Production..... 393
Canada, Phosphate Production..... 393
Canada, Platinum Exports..... 394
Canada, Pottery Production..... 393
Canada, Pyrite Production.....393, 394
Canada, Salt Production..... 393
Canada, Sand Exports 393
Canada, Sewer Pipe Production..... 393
Canada, Slate Production..... 393
Canada, Talc Production..... 393
Canada, Terra Cotta Production..... 393
Canada, Tripoli Production..... 393
Canada, Zinc Production..... 393
Canadian Copper Co. Plant at Copper Cliff, Ont. 151
Canadian Geological Survey as an Educational Influence 402
Canadian Geological Survey Field Work. 936
"Canadian Geological Survey, Report".. 690
Canadian Mining Institute "Journal" 610, 730
Canadian Mining Institute, Toronto Meeting.....114, 291, 319, 387, 400
Canadian Pacific Railroad Freight Rates 227, 332
Canadian Products for America.....1,006
*Cananea Native Copper..... 23
*Cananea, Ore Dressing at.....1,044
*Cananea, View of..... 23
*Cancilni's Pat. Ore Car..... 694
*Candelaria Silver Mines, Nev..... 150
Candles for South African Mines..... 156
*Cantilever Battery Frame..... 404
*Cape Breton, Cheticamp..... 283
Cape Colony, Saltpeter Deposits..... 342
Cape Copper Co., Ltd., Report.....1,012
*Capel Fan at Eureka Collieries..... 879
*Cape Nome, Geology of..... 472
Cappeau Furnace Litigaton.....549, 712
Cappon's Pat. Cementing Material..... 694
Carbide, Producing, Cowles's Pat..... 170
Carbide, Producing, Horry's Pat..... 694
Carbon Articles, Acheson's Pat..... 130
Carbon Retort, Duty on..... 128
Carbonic Acid, Determining, in Gases, Bodlander's Pat. 290
"Carboniferous Fossils from Gascoyne District, W. A." 485
Carbons, Waste from Arc-Lamp for Making Paint 557
Carborundum 685
Carborundum Production, U. S..... 4
Carbureted Air Making, Wilson's Pat.. 169
Card Index..... 288
*Card's Pat. Concentrator..... 734
Card's Pat. Oil Well Tube Support.... 894
Carkeek's Pat. Distributing Ore-Pulp to Concentrating Tables..... 614
Carlin's Pat. Sucker Rod Cleaner.....1,054
Car Loading, Willson's Pat..... 894
Carnahan, F. W., Ores from Igneous Magmas 756
Carnbrea & Tincroft Mines, Ltd., Cornwall 347
Carne, J. E., "Kerosene Shale Deposits of New South Wales".....88, 486
Carnegie, Andrew, Donation for Engineering Building..... 430
Carnegie, Andrew, James Watt Memorial 447
Carnot, Adolph, "Analyses of Metalloides" 446
Carnotite, Discovery of..... 956
Carpenter, F. R., "New Geology and Vein Formation"..... 890
Carpenter, F. R., Vein Formation and the New Geology..... 312
Carpenter's Pat. Composition..... 653
Carrara Marble 509
Carroll, James P., "Report of Mine Inspector of Maryland"..... 88
Carson, Howard A., "Report of Boston Transit Commission" 88
Cartagena, Spain, Iron Ore Market..Weekly
*Carter's Pat. Concentrating Sluice Box 654
Carter's Pat. Muffle..... 330
Carter, T. Lane, Agriculture on the Rand 1,049
*Carter, T. Lane, Kaffir Mine-Workers.. 281
*Carter, T. Lane, Slime Problem..... 435
*Carter, T. Lane, Support of Excavations in Witwatersrand Mines..... 719
Carver's Pat. Quicksilver Feeder for Stamp Mills 1,054
*Caryl & Snyder Slate Picker..... 319
Case Hardening Compound, Cadotte's Pat. 129, 694
*Case Laboratory Ore Crusher..... 325
Cassel's Pat. Extracting Precious Metal by Electrolysis..... 169
Casting Machine, Crossley's Pat..... 893
Casting Machine, Stroh's Pat..... 813
Casting Metals in Vacuums, Burrow's Pat. 574
Casting Process, Franklin's Pat..... 89
Castings, Making, James's Pat..... 773
Cast-Iron and Finished Castings, Standard Specifications for.....1,057
Cast-Iron, Tempering, Gilmour & Lindsay's Pat. 573
*Cast-Iron Turn-Table 195
Castle Dome District, Ariz..... 36
Catlin, R. M., on Mechanical Ingenuity in Mining 474
Cattermole's Pat. Classification and Separation of the Metallic Constituents of Ores 1,054
Cattermole's Pat. Oil Concentration.... 490
Caustic Potash, Electrolytic..... 502
Cazin's Pat. Dust Chamber..... 934
Celestite 892
"Cement Age" 848
Cement Blocks, Making, Peeler's Pat..1,054
Cement Brick Machine, Luttrell & Cantrell's Pat..... 894
Cement Brick Machine, Staley's Pat.... 974
Cement, Cappon's Pat..... 694
Cement Clinker Burning, Edison's Pat.. 813
Cement Exports and Imports, Great Britain 141, 502, 1,026
Cement Furnace, Sheneman's Pat..... 574
Cement, Hydraulic, Gresley's Pat..... 129
Cement Imports and Exports, U. S..82, 203, 285, 381, 542, 745, 945
Cement Industry, Germany..... 952
Cement Industry, Recent Developments 81
Cement Kiln Cleaning Machine, Van Doren's Pat. 693
"Cement Kiln, Rotary, Thermal Efficiency of" 286
Cement Manufacture in Kansas..... 810
Cement Manufacture, Rotary-Kiln in.... 834
Cement, Maturing, Gerdes's Pat..... 409
Cement Mold, Coltrin's Pat..... 653
Cement Mold, Park's Pat..... 409
Cement Mortar, Quality of Sand Required for 968
Cement-Plaster Kettle, Malone's Pat.. 614
"Cement Plaster, Laramie"..... 610
Cement Production, Canada....393, 648, 800
Cement Production, U. S..... 4
*Cement Quarry Railroad..... 808
Cement Shingle, Zwerk's Pat..... 89
Cement, Slag, Making, Gramm's Pat.... 653
Cement for Tonta Basin Dam, Ariz.181, 422
Cement Workers' Strike, Cal..... 451
Central America, Gold Production..... 6
Central New England & Western Railroad, New Anthracite Road..... 673
Centre Star-War Eagle-Le Roi Mines, Proposed Consolidation.....912, 936
Centrifugal Pump, Look's Pat..... 370
Centrifugal Pump, McKay's Pat..... 573
"Ceramic Industry, Progress of"..... 446
Ceresine Imports, New York..... 221
Ceribelli's Pat. Treating Leucite..... 170
Cerium 449
Ceylon Graphite Imports, U. S..... 280
Ceylon, New Mineral Found in..... 922
Chain, Dodge's Pat..... 894
Chains for Power Transmission..... 641
Chalk, Duty on..... 329
Chalk Imports, New York..... 221
Chalk Production, Great Britain..... 430
Chalon, Paul F., "Linares Lead Mining, Spain" 1,011
Chamberlin, Thomas C., "Geologic Processes and Their Results".....1,050
Champion Reef Gold Mg. Co., India, Report 87
Chandler, Charles F., Fortieth Anniversary as Professor at Columbia School of Mines..... 952
Chanute, O., on Preserving Mine Timbers 732
*Chapman, R. H., Value of Topographic Maps 843
Charcoal Making, Mackie's Pat..... 694
*Charleton, A. G., Mining in Western Australia 28
Charlier's Pat. Melting Furnace..... 370
Charring and Dry Distillating Apparatus, Aminoff's Pat..... 90
"Charters Towers Gold-Field, Mining Review" 526
Charters Towers Mining Dividends, N. S. W. 252
Chase, I. McKim, "Art of Pattern-Making" 486
Chase's Pat. Artificial Stone..... 854
Chatterton, Fenimore, "Resources of Wyoming".....526, 1,011
Chauvenet, Regis, Technical Education. 596
Chemical and Allied Mineral Trades, American, in 1903 57
Chemical and Mineral Markets.....Weekly
"Chemical Calculations"..... 207
Chemical Changes, Effecting, Cowles's Pat. 170
Chemical Compounds, Producing, Griffin's Pat..... 653
"Chemical Factor in Human Progress" 166
*Chemical Laboratory for Metallurgical Work 917
"Chemical Technology in Its Applications to Arts and Manufactures".... 327
Chemische Fabrik Griesheim Elektron's Pat. Electrode 1,054
Chemists, Assayers and Metallurgists, Western Society for..... 878
Chemists, Training of.....634, 755
*Cheticamp, Cape Breton..... 283
Chewings, Charles, "Rock Phosphates and Mineral Fertilizers"..... 446
Chicago Coal and Iron Markets.....Weekly
Chicago, River Tunnels..... 703
Chile, Coal 299, 485
Chile, Coal Duty Proposed.. 884
Chile, Copper Production.....8, 794
Chile, Gold Production..... 6
Chile, Iodine Production.....1,026
"Chile, Mineral Resources"..... 770
Chile, Nitrate of Soda Exports..57, 58, 182, 302, 342, 502, 510, 866, 987, 1,065
Chile, Nitrate of Soda, Export Tax..57, 430
Chile, Nitrate of Soda Industry, Labor in.....502, 666
Chile, Nitrate of Soda Land Sales..... 667
Chile, Nitrate of Soda Market and Prices 141, 221, 342, 502, 542, 626, 786, 905, 987, 1,066
Chile, Nitrate of Soda Production....58, 182, 302, 542, 786, 866, 905, 986
Chile Nitrate of Soda Propaganda Expenses 606
Chile, Nitrate of Soda Trade in 1903... 310
Chimney-Cowl, Whitton's Pat..... 814
China, Gold Production 6
China, Mining in 428, 432
*China, Mining Regulations for the Jehol Region..... 433
China, Silver Imports..... 325
China, Tin Production..... 18
Chinese Labor in British Columbia..... 695
Chinese Labor for the Transvaal..252, 856, 991, 1,017
Chinese in the Straits Settlements..... 230
Chism, Richard E., "Encyclopedia of Mexican Mining Law"..... 930
Chlorination Barrel, Armbruster's Pat. 90
Chlorination Process in British Columbia 24
Choiniere's Pat. Pump Valve..... 854
Christ & Goerg's Pat. Rock Drill..... 614
Christmas Island, Phosphate Shipments. 102
Christy's Pat. Recovering Gold and Silver from Cyanide Solutions..... 614
Chrome-Nickel Steel 110
Chrome Ore Exports, New Caledonia, 377, 622, 863
Chrome Ore Exports, New Caledonia to America 350
Chrome Ore Lining for Furnaces..... 874
Chrome Ore Mining, New Caledonia.... 20
Chrome Ore Production, Canada.....393, 800
Chuck for Rock Drills, Leigh's Pat.... 250
Church, John A., Engineers as Presidents 755
Church, John A., Mine Ventilation..... 431
Chute, Baldwin's Pat..... 773
"Cinnabar Furnace"..... 485
City & Suburban Mine Rock Drill Tests 768
Claims, Adverse, State Laws on..... 973
Clairton, Steel Plant Purchase.....713, 743
Clark, Donald, on Assay of Nickel.....1,004
Clark, Donald, Delprat Process for Mixed Sulphides..... 122
Clarke, Edward, Secondary Enrichment. 70
Clark's Pat. Brick-Kiln Furnace..... 210
Clark's Pat. Copper Ore Reduction..... 814
Clark's Pat. Tunnel Construction..... 973
Clark, W. N., Electric Haulage in Metal Mines 324
Clasper's Pat. Making Sheet-Iron..... 614
"Clay Deposits at St. Georges Bay Tasmania" 770
Clay Imports and Exports, U. S..285, 381, 542, 745, 945
Clay, Indiana 1,021
Clay Production, Great Britain..... 430
"Clay Working Industries of U. S."..... 286
"Clays of U. S."..... 326
Clear Creek County Mining, Colo., in 1903 39
Clements, J. Morgan, "Vermilion Iron Range, Minn." 246
Clennell, J. E., Estimation of Available Cyanide 513
*Cleveite from Quebec..... 441
Cleveland Coal and Iron Markets....Weekly
Cleveland Iron Market in 1903..... 49
Clifford's Pat. Mine Ventilation..... 369
*Clifford's Pat. Ventilating Fan Structure 369
*Clifton District, Arizona..... 679
Clutch Head for Rock Drills, Littleton's Pat. 773
Coahuila Coal-Field, Mex..... 696
Coal in 1903 and 1904.....2, 51
Coal, Alabama, for Louisiana..... 99
Coal, Alabama, for Mexico..... 499
*Coal, Allard Screen for Separating Slate from 317
Coal, Anthracite in Australia..... 568
"Coal, Anthracite, Communities"..... 286
Coal, Anthracite Culm, Utilization for Producer Gas 563
Coal, Anthracite Market.....Weekly
Coal, Anthracite Mines Flooded..... 417
Coal, Anthracite Mines on Girard Estate 682
Coal, Anthracite Mine Surveying Practice 240
Coal, Anthracite, Preparation for Market 672
Coal, Anthracite Railroad, New..... 673
Coal, Anthracite Railroads, Suit Against, 549, 782, 863
Coal, Anthracite Shipments, 54, 139, 259, 450, 622, 784, 984
Coal, Anthracite Trade in 1903..... 54
Coal, Anthracite Washery, Large..... 807
Coal, Australian, for San Francisco.... 180
"Coal, Austria" 690
Coal, Available, Includes Underlying Coal Though Its Mining Is Costly.... 853
Coal, Bituminous, Atlantic Seaboard Trade in 1903..... 55
Coal, Bituminous, Cleaning..... 557
Coal, Bituminous, Large Contract for.. 329
Coal, Bituminous Market.....Weekly
Coal, Bituminous Miners' Wages..3, 268, 469, 494. 509
Coal, Bituminous Miners' Wages, Result of Convention.....268, 469
Coal, Bituminous Miners, Will They Strike? 389
Coal, Bituminous, Storage of..... 725
Coal Borer, Blackett's Pat..... 614
Coal in Borneo..... 206
Coal Breaker, Decker's Pat..... 734
Coal-Bridge Hoists, Rope System for, Titcomb's Pat..... 330

Coal Briquette, Binders for..... 563
Coal Briquette, Custodis's Pat..... 370
Coal Briquette Industry in California, 682, 935
*Coal Briquette Industry in Germany... 562
Coal Briquette, Lieb's Pat..... 574
Coal Briquette, Profits in Manufacture of 566
Coal Briquettes in U. S..... 548
Coal Bucket Release, Bissett's Pat.... 774
"Coal Burning Without Smoke"..... 630
Coal, Chile 485
Coal, Chile, Proposed Duty..... 884
Coal Chute, Peck's Pat..... 370
Coal, Coastwise Freight Rates..... 55
Coal and Coke Car, Simonton's Pat.... 934
Coal and Coke, Determination of Sulphur in 202
Coal and Coke, Exports and Imports, France 420
Coal and Coke, Exports and Imports, Germany 299, 500, 623, 864
Coal and Coke Exports, Great Britain, 140, 260, 340, 428, 500, 703, 864, 1,024
Coal and Coke, Exports and Imports, Spain.....161, 583, 687, 840
Coal and Coke, Exports and Imports, U. S.....4, 219, 379, 540, 743, 902
Coal and Coke Imports, Belgium..... 260
Coal and Coke Imports, San Francisco.. 100
*Coal and Coke Plant, Gallitzin, Pa.... 398
Coal and Coke Production, Alabama, 260, 299, 516
Coal and Coke Production, Canada..... 393
Coal and Coke Production, Germany, 623, 824
Coal and Coke Production, Spain..... 584
Coal and Coke Production, U. S..... 4
Coal and Coke Production, West Virginia 764
Coal Companies, Profits of French..... 958
Coal Consumed by English Railways.... 482
Coal Consumed by the Siberian Railroad 279
Coal Consumption, California..... 180
Coal Consumption, Low, at a Colliery.. 649
Coal Cutter, Grave's Pat..... 210
Coal Cutter, Jones & Davies's Pat..... 530
Coal Cutter, Kumpfer & Hoppe's Pat... 90
Coal Cutter, Leichman's Pat..... 370
Coal Cutter, Millward's Pat..... 130
Coal Cutter, Neukirch's Pat.....130, 370
Coal Cutting, Peake & English's Pat.... 529
Coal Depository, Mackrow & Cameron's Pat. 129
"Coal Deposits of Washington"..... 445
Coal Discovery, Carbon County, Mont... 177
Coal Discovery, Japan..... 399
Coal Discovery, First, in U. S..... 190
Coal Discovery, New, in France..... 241
Coal Discovery, New, in Indiana..... 496
Coal Discovery, Queensland 172
Coal Discovery, Russia..... 84
Coal Drill, Weiss's Pat.....1,014
Coal Dust as a Factor in Mine Explosions 753
Coal Dust Firing.....168, 598
Coal Elevator, Deady's Pat..... 489
*Coal Exhibits at St. Louis Exposition.. 559
Coal, Exploration for, in England..... 916
Coal Exports, Canada 394
"Coal-Field, Barnsboro-Patton, Pa."..... 848
"Coal-Field, Bituminous, Recent Work in" 570
Coal-Field, Campine, Belgium..... 720
Coal-Field, Coahuila, Mex..... 696
Coal-Field, Crow's Nest, B. C..... 601
"Coal-Field Directory"..... 126
Coal-Field, Donetz, Russia..... 688
*Coal-Field, Missouri 564
Coal-Field, Nevada 1,009
Coal-Field, New, in Hungary..... 280
Coal-Field, New, Welsh 767
Coal-Field of Shantung..... 888
*Coal-Field of the Big Sandy Basin..... 235
Coal-Field, Wankie, S. Af.....187, 323
Coal Gas, Making, Settle & Padfield's Pat. 1,013
Coal Handling, McClellan's Pat..... 169
Coal Imports, Chile..... 299
Coal Imports, Free Entry of.....1,053
Coal Imports, Turkey..... 824
Coal in the Far East..... 971
Coal in Indo-China..... 681
Coal, Lake Freight on.....1,031
Coal Lands, Canadian Regulations..... 291
Coal Lands, Reservation in Deed Strictly Construed 973
Coal Lease, Royalties and Damages Under 249
Coal Loader, Allison's Pat..... 89
Coal in Manchuria..... 14
Coal Markets: Anthracite, Bituminous, Birmingham, Ala.; Chicago; Cleveland; Pittsburg; San Francisco; Foreign .....Weekly
Coal, Meaning of..... 550
Coal Mine Accident, Harwick, Pa...149, 632
Coal Mine Accidents, Alabama.....459, 664
Coal Mine Accidents, Illinois..... 52
Coal Mine Accidents, Indiana..... 336
Coal Mine Accidents, Pennsylvania..... 120
Coal Mine Accidents, West Virginia.... 765
Coal Mine Ambulance..... 877
*Coal Mine, Auchincloss, Pa..... 726
Coal Mine Fires, Fighting... 922
Coal Mine Foremen in Alabama..... 139
Coal Mine Licenses in British Columbia. 735
*Coal Mine, Henry, W. Va..... 277
Coal Mine, Large, in Great Britain....1,031
Coal Mine Refuse, Contamination of River Water by.....188, 217
*Coal Mine Shaft, Concrete Lined..... 646
*Coal Mine Shaft, Repairing a Caved.. 889
Coal Mine Shafts, Circular or Rectangular 952
*Coal Mine, Vesta No. 4.....1,039
Coal Miners' and Operators' Interstate Conferences....214, 254, 268, 298, 413, 454, 469, 494, 580, 611
Coal Miners' Strike, Colorado.....92, 855
Coal Miners' Strike, Impending in Alabama 993
Coal Miners' Strike, Ohio..... 823
Coal Miners' Wages, Alabama.623, 784, 1,063
Coal Miners' Wages, George's Creek, Md. 700
Coal Miners' Wages, Pennsylvania..219, 340, 377, 662, 700
Coal Miners' Wages, Indiana.....1,021
Coal Miners' Wages, West Virginia...53, 663
Coal Mines, Discrimination in Furnishing Cars to..... 892
*Coal Mines, Eureka.....9, 879
Coal Mines, Mechanical Equipment of... 567
Coal Mines, New, in England..... 234
"Coal Mines Report, West Virginia"... 848
*Coal Mines, Somerset, Pa..... 159
*Coal Mines, Somerville..... 120
Coal Mining in Alabama in 1903..... 52
"Coal Mining Along the Southeastern Margin of the Wilmore Basin, Cambria Co., Pa."..... 848
Coal Mining, British Columbia..... 133
Coal Mining, Canada..... 736
Coal Mining, Colorado..... 655
Coal Mining, Cost of Anthracite....348, 592
Coal Mining, Cost of, in Germany..... 804
Coal Mining, Croatia..... 398
Coal Mining by Electricity in Pennsylvania 873
Coal Mining, Electric Hoisting Engines in 1,033
Coal Mining, First..... 550
Coal Mining, Holland..... 190
Coal Mining, Hygienic Status of..... 441
Coal Mining in Illinois in 1903..... 52
Coal Mining in Indiana in 1903..... 53
Coal Mining in Iowa in 1903..... 53
Coal Mining Lease, Liability as to Royalty 733
Coal Mining Machine Bit, McKinney's Pat. 370
Coal Mining Machine, Foglesong's Pat.. 529
Coal Mining Machine, Robinson & Ball's Pat. 90
Coal Mining by Machines in U. S..... 718
Coal Mining Machines in Australia..... 686
Coal Mining Machines in West Virginia. 53
Coal Mining, Melbourne..... 452
Coal Mining, Mexico..... 190
Coal Mining, Montana..... 42
Coal Mining, Oregon..... 728
Coal Mining in Pittsburg District....53, 914
Coal Mining in West Virginia in 1903.. 53
Coal, Nova Scotia..... 553
Coal and Oil in Central Asia..... 565
Coal Oil Duty in Canada..... 976
Coal vs. Oil as Fuel..... 56
Coal-Pockets and Ore-Bins, Design of.. 728
Coal Production..... 912
"Coal Production in 1902"..... 446
Coal Production, Africa...51, 138, 418, 598, 741, 902, 1,062
Coal Production, Alabama.52, 99, 219, 419, 948
Coal Production, Alaska..... 75
Coal Production, Arkansas..... 52
Coal Production, Austria-Hungary....51, 558
Coal Production, Belgium..... 51
Coal Production, Bohemia..... 553
Coal Production, Canada..... 51
Coal Production, Colorado..... 52
Coal Production, France.....299, 420
Coal Production, Germany..... 51
Coal Production, Great Britain...51, 430, 954
Coal Production, Illinois..... 52
Coal Production, Indiana.....52, 53
Coal Production, Indian Territory..... 52
Coal Production, Iowa.....52, 53
Coal Production, Japan..... 309
Coal Production, Kansas..... 52
Coal Production, Kentucky..... 52
Coal Production, Maryland..... 52
Coal Production, Michigan..... 52
Coal Production, Missouri..... 52
Coal Production, Montana..... 52
Coal Production, Natal....51, 138, 418, 598, 741, 902, 1,062
Coal Production, New Mexico..... 52
Coal Production, New South Wales...31, 638
Coal Production, North Dakota..... 52
Coal Production, Nova Scotia..... 52
Coal Production of the World..... 51
Coal Production, Ohio..... 52
Coal Production, Pennsylvania..... 52
Coal Production, Queensland..... 897
Coal Production, Russia..... 51
Coal Production, Tennessee..... 52
Coal Production, Transvaal..... 798
Coal Production, U. S..... 52
Coal Production, Utah.....52, 217
Coal Production, Vancouver Island..... 93
Coal Production, Virginia..... 52
Coal Production, Washington 245
Coal Production, West Virginia.....52, 53
Coal Production, Wyoming..... 52
Coal, Recent Literature on Geology of.. 848
Coal Resources of the American Yukon.. 560
"Coal Resources of the Yukon"..... 445
*Coal and Rock Drilling Machine, Koontz's Pat..... 574
Coal, Russia 1,004
*Coal Seams, Packing by Flushing..... 637
*Coal Separator, Emery's Pat..... 530
*Coal Separator, Kenner's Pat..... 210
Coal Separator, Koyl's Pat..... 529
Coal Separator and Washer, Spencer's Pat. 409
Coal Shippers, Proper Regulations Are Not Discrimination Against..... 973
Coal Siberia..... 558
"Coal Statistics"..... 770
Coal Stock Quotations: New York; Philadelphia; Pittsburg.....Weekly
"Coal Supplies, Royal Commission Report" 729
Coal Tipple, Fitch's Pat..... 694
Coal Trade in Germany..... 107
Coal Traffic, Lehigh Canal..... 164
Coal Used in By-product Coke Ovens, U. S..... 394
Coal Washer, Wright's Pat..... 410
Coal Washery, Large..... 807
"Coal in Westphalia"..... 366
Coaling Boats, Stearns's Pat..... 894
Coaling Station, Robertson's Pat..... 733
Coaling Station Storage Apparatus, MacLennan's Pat..... 934
Coating Compound, Jacobs's Pat..... 773
Cobalt Deposits, New, in Ontario..... 371
Cobalt Exports, New Caledonia.377, 622, 863
Cobalt in Kentucky..... 208
Cobalt Oxide Production, U. S..... 4
Cobalt Production, Missouri..... 13
Cobalt Separation from Nickel Electrolytically 30
Cochran's Pat. Iron Founding..... 129
Coeur d'Alene, District in 1903..... 13
Coeur d'Alene, Idaho, Notes from..... 923
Coeur d'Alene Ore Freight Rates..... 93
Coeur d'Alene Ore for St. Louis Exposition 576
Coeur d'Alene River Pollution, Idaho.. 371
Coeur d'Alene, Slime Treatment in..... 451
Coghlan, T. A., "Statistical Account of Australia and New Zealand"..... 848
Coinage, Great Britain..... 142
Coinage for Philippines 7
Coinage, U. S.....7, 222, 382, 586, 746, 946
Coinage in U. S. in 100 Years..... 874
Coins, Foreign, Prices of.....Weekly
Coins, Small 469
Coke. (See also under Coal.)
Coke Car, Triple-Hopper, Hansen's Pat. 409
Coke Discharging from Ovens, Kershgens's Pat..... 370
Coke Drawer's Lamp, Snyder's Pat..... 410
Coke Drawing Machine, Hebb's Pat..... 129
Coke Handling, Hunt's Pat..... 369
Coke Lorry, MacDougal's Pat..... 90
*Coke Oven, Beam's Pat..... 854
Coke Oven, By-product Industry, New, in Minnesota 354
Coke Oven, By-product, Yield of..... 394
*Coke Oven Charging, Wellman's Pat.. 450
Coke Oven Door Hoist, Mason's Pat.... 654
Coke Oven Door, Troutman's Pat..... 209
Coke Oven Gases, Utilization of.....1,034
*Coke Oven, Koppers's Pat..... 370
Coke Oven, Maxwell's Pat..... 934
Coke Oven, New Semet-Solway By-product 929
Coke Oven Retort, Kloman's Pat..... 693
*Coke Oven, Retort, Scott's Pat..... 693
Coke Oven, Schroeter's Pat..... 973
Coke, Petroleum..... 359
Coke Production, Connellsville, Pa..... 204
Coke Puller, Doss' Pat..... 654
Coke Puller, Jones' Pat..... 654
Coke Quenching and Bleaching, Moore's Pat. 529
Coke Quenching, Price's Pat..... 933
Coke, Relative Heat Value of..... 328
Coke Retort, Laurenius's Pat..... 170
Coke Saving in Pyrite Smelting.....1,004
Cokedale Coal Co., Mont..... 740
Cole, Leon J., "Delta of St. Clair River" 327
Coleman, A. P., on Sudbury Nickel Deposits 73
Coleman, A. P., "Sudbury Nickel Deposits" 1,050
Collateral Evidence..... 873
Collier, Arthur J., "Coal Resources of the Yukon".....445, 569
"Colliery Manager's Pocketbook"..... 207
*Collins, Arthur L..... 878
Collins, George E., Davis Cyanide Regeneration Process..... 191
Collins, George E., Re-grinding Machinery 635
Collins, Henry F., Decline of Metallurgical Enterprise in England..... 196
Collins, Henry F., Mesh vs. Aperture.. 70
Collins, Henry F., Wollastonite Rock-Mass in Mexico..... 364
Collins, J. H., On the Assay of Tin.. 928
Collins, J. H., "Anniversary Address of President of Royal Geological Society of Cornwall" 570
Collins, J. H., on Mining in Cornwall 553
Colombia, Asphalt Mines..... 607
Colombia, Gold Production..... 6
Colombia, Placer Mining in.....492, 963
Colombia, Tariff of..... 422
*Colorado 38
Colorado, Alum Discovery in..... 422
Colorado, Coal Miners' Strike.....92, 855
Colorado, Coal Mining..... 655
Colorado, Coal Production..... 52
Colorado, Code of Signals for Mines... 331
Colorado, Construction of a Deed Conveying Mining Claims..... 169
Colorado, Copper Production..... 434
Colorado, Cyanide Process in..... 34
Colorado, First Gold Discovery..... 674
Colorado, Gold and Silver Production 5, 434
Colorado, Labor Conditions, 491, 496, 660, 913, 935, 952, 955, 975, 981, 1,021 1,032, 1,051, 1,055
Colorado Labor Conditions, Press on, 832, 838
Colorado, Lead Production..... 434
Colorado, Locating Mineral Lands in.. 655
"Colorado Mineral Resources"..... 689
Colorado, Mining Accidents.....80, 120
Colorado, More Lawlessness in..... 913
Colorado, Pyrite Smelters in..... 371
Colorado, Pyrite Used in..... 247
Colorado, River Pollution in..... 695
Colorado Springs Mining Stock Market Weekly
Colorado, Surveys Made in 735
*Colorado, Topographic Map of..... 843
Colorado Troubles and Newspaper Notoriety 832, 838
Colorado Zinc Producton..... 434
Coltrin's Pat. Cement Mold..... 653
"Columbian" 570
Columbia University, New Departure in Mining Education..... 230
Columbite in Oklahoma..... 398
Comox Coal Discovery, B. C..... 211
Complaint Must Be Sustained by a Proof 852, 892
Composition of Matter, Lederoth's Pat. 409
*Compressed Air Motor..... 689
Compressometer, Tretch's Pat..... 370
Compressor, Elastic-Fluid, Bland's Pat. 894
Compressor Valve, Reeve's Pat..... 529
Comstock, Deep Mining on..... 110
Comstock Mining Companies, Financial Statements...139, 298, 499, 663, 823, 1,023
Comstock, Theo. B., Bureau of Mining 152
*Concentrating Copper Ore at Cananea..1,044
*Concentrating Mesabi Iron Ores..... 960
Concentrating with Oil in British Columbia 372, 373
Concentrating with Oil in Canada..... 616
Concentrating with Oil, Cattermole's Pat. 490
Concentrating with Oil, Elmore's Pat.. 170
Concentrating with Oil, Van Meter & Boss's Pat.....1,014
Concentrating Ores, Oil for..... 152
*Concentrating Sluice Box, Carter's Pat. 654
*Concentrating Table, Sperry..... 484
*Concentrating Zinc Ore in Virginia...1,001
Concentrator and Amalgamator, Bonnington's Pat..... 774
*Concentrator and Amalgamator, Klein's Pat..... 854
*Concentrator and Amalgamator, Russell's Pat..... 210
Concentrator and Ore Sizer, Phinney's Pat. 1,054
*Concentrator, Anderson's Pat..... 170
Concentrator, Bailey & Wild's Pat.. 290
*Concentrator, Card's Pat..... 734
Concentrator, Graupner's Pat..... 734
Concentrator, Hicks's Pat..... 209
Concentrator, Jahraus's Pat..... 210
*Concentrator, Ruedy's Pat..... 654
Concentrator, Schoenfeldt's Pat..... 129
Concentrator, Shler's Pat..... 734
Concentrator, Storey's Pat..... 130
Concentrator, Tulloch's Pat..... 128
*Concentrator, Week's Pat..... 694
*Concentrator, Weller's Pat..... 614
Concentrator, Wilfley Ore Concentrator Co.'s Pat..... 210
*Concentrator, Woodbury's Pat..... 653
Concentrator, Wismeyer's Pat..... 250
Concrete 309
Concrete Battery Foundations....877, 1,036
Concrete Block Mold, Tiffany's Pat.... 973
Concrete Brick Making, Dumm's Pat.. 409
Concrete Building Blocks, Mallette's Pat. 249
Concrete Filling for Iron and Steel Columns 917
*Concrete Lined Shaft..... 646
Concrete and Metal Structure, Cummings's Pat..... 933
Concrete Mixer, Kinsell's Pat..... 490
"Concrete, Reinforced, Construction".. 446
Concrete, Reinforced, Construction, Kampmann's Pat.....1,013
"Concrete, Reinforced, Experimental Researches on" 446
Concrete, Requirements for..... 518
Concrete, Rubble, Use for Thin Walls.. 558
Concrete, Wet vs. Dry..... 924
*Concrete Work About Mines..... 805
*Congress Con. Mines Co., Plant..... 990
"Connecticut, Storrs Agricultural Experiment Station Report"..... 246
Connellsville Coke Production, Pa..... 204
Connellsville, Coke Shipments.....Weekly
Conner's Pat. Conveyor-Chute..... 973
Considere, Armand, "Experimental Researches on Reinforced Concrete".... 446
Consolidated Gold-fields of South Africa Medal 67
Contardo's Pat. Electric Furnace..... 210
Contract of Purchase, When It Cannot be Rescinded.....1,013
Contract Regarding Rights to be Interpreted by Legal Limitations.....1,013
Contract, Right of, Cannot be Defeated by Parties' Own Act..... 89
*Converter Accessories 510
Converter Attachment, Rosenthal's Pat. 814
*Converter, Burrow's Pat..... 529
*Converter for Raw Ore Smelting.... 757
Converter System, Berghoefer's Pat.... 573
Conveyor, Bivert's Pat..... 128
Conveyor-Chute, Conner's Pat..... 973
Conveyor Controlling System, Eastwood's Pat..... 90
Conveyor, Crossley's Pat..... 893
Conveyor, Delaney's Pat..... 330
Conveyor, Endless, for Pipe Mills, Jarrett's Pat. 290
Conveyor, Edwards's Pat.....1054
Conveyor, Foshee's Pat..... 409
Conveyor, Hart's Pat..... 853
Conveyor, Heintz's Pat..... 369
Conveyor, James's Pat..... 773
Conveyor, McCabe's Pat..... 450
Conveyor, McDonald & McKee's Pat.. 450
Conveyor, Marcus's Pat..... 693
Conveyor, Miller's Pat.....813, 893
Conveyor, Nicholson's Pat..... 410
Conveyor, Notter's Pat..... 249
Conveyor, Pan, Dodge's Pat..... 129
Conveyor, Patterson's Pat.....169 893
Conveyor, Ridgway's Pat.....1,054
Conveyor System, Keating's Pat..... 574
Conveyor Tripper, Baldwin & Ticknor's Pat. 773, 774
Conveyor, Wainwright's Pat..... 854
Conveyor, Webster's Pat..... 290
Conveyor, Willson's Pat..... 290
Conveyors, Continuous Bucket..... 681
Conveyors, Machine for Rolling, Gustavsen's Pat..... 893
Conveyors, Mechanical.....640, 681
Conveyors, Reciprocating..... 717
Conveyors, Rotary Internal Screw..... 836
*Conwey Placer Mining Co., Dredging in Montana..... 846
Cooke, A. G., "Electric Lighting"..... 327
Cook, E. H., Breaking Up Furnace Sows 955
Cook Inlet Placer Fields, Alaska..... 76
Cooklin, E., Method of Estimating Tungsten in Steel..... 957

Cooling Rack for Bars, McMurtry's Pat. 469
Cooper, H. N., "Chemical Analysis of California Petroleum" 809
Cooper's Pat. Obtaining Gas from Wells 370
Copper in 1903 8, 793
Copper-Aluminum Alloys, Jacobsen's Pat. 1,014
Copper and Arsenic Alloys 714
Copper-Bearing Area in Quebec, New 483
Copper as a Collector of Precious Metals in Smelting 1,042
Copper, Commercial, Effect of Impurities on 284
Copper Consumption, U. S. 8
*Copper Converters, Bessemer 437
Copper Converters, Mold Car for Use at 961
Copper, Cyanide, Chemistry of 795
Copper Cyanide Solution 510
Copper, Demand for 507
"Copper Deposition, Theory of" 526
Copper Deposits, Encampment District, Wyoming 1,008
Copper Deposits, Orange County, Vt. 677
"Copper Deposits, Redding Region, Cal." 729
*Copper District, Cheticamp, C. B. 283
"Copper, Electrolytic Refining" 729, 914
Copper, Elimination of Impurities from 755
Copper Exports, Atlantic Ports Weekly
Copper Exports, Canada 394
Copper Exports and Imports, Germany, 343, 867
Copper Exports and Imports, Great Britain 142, 343, 503, 706, 867, 1,027
Copper Exports and Imports, U. S. 3, 8, 222, 382, 543, 713, 746, 906
Copper Exports, New Caledonia 622
Copper Exports, Spain 161, 687, 840
Copper Exports, Tasmania 172
Copper Extraction, Le Sueur's Pat. 529
*Copper Extraction at Rio Tinto 644, 717
Copper-Gold Tailings, Cyanidation of. 797
"Copper Handbook" 970
Copper, Hardening, Oxnam's Pat. 90
Copper and Iron Alloys, Darling's Pat. 530
Copper and Iron Tubes, Duty on 128
"Copper and Lead, Geological Map and Results of Boring for, in W. A." 446
*Copper Losses in Blast Furnace Slags. 395
"Copper Manual" 166, 650
Copper Market in 1903 8, 9
Copper Market and Prices Weekly
Copper Miners' Strike, Michigan 303
Copper from Mine Waters 693
Copper Mines, Russia 322
Copper Mines of the South 37
"Copper Mines, Vermont, Notes on" 729
Copper Mining Accidents, Michigan, 79, 120
*Copper Mining, Alaska 76
*Copper Mining, Clifton, Ariz 679
Copper Mining, Lake Superior in 1903 10
Copper Mining, Montana 41
Copper Mining, North Carolina 37
Copper Mining, Profits in 348
Copper Mining in the Southwest 10
Copper Mining, Virginia 37
Copper, Native, in Greenstone from the Pacific Slope 276
*Copper, Native, in Stope at Cananea 23
Copper, New Use for 228
Copper and Nickel, Electrolytic Separation of 363
Copper-Nickel Matte Treatment, Shields's Pat. 1,054
*Copper Ore Dressing at Cananea 1,044
Copper Ore, Leaching 328
Copper Ore, Lixiviating, Van Arsdale's Pat. 210
"Copper Ore, Occurrences of in South-west Africa 1,050
Copper Ore, Oil Concentration of 611
Copper Ore Reduction, Clark's Pat. 814
Copper Ore Treatment, Hybinette's Pat. 290
Copper Ore Treatment, Rider's Pat. 774
Copper Ore Treatment, Sebillot's Pat. 128
Copper Plates, Cleaning 209
Copper Plates in Stamp Mills 270
Copper, Position of 713
Copper Pouring Spoon, Bennett's Pat. 409
Copper Precipitation from Cyanide Solutions 791
Copper Prices 102, 753
Copper Process, Payne-Gillies 362
Copper Production, Africa 794
Copper Production, Argentina 794
Copper Production, Australia 8, 794
Copper Production, Austria-Hungary 794
Copper Production, Bolivia 794
Copper Production, British Columbia 24
Copper Production, Canada, 8, 23, 393, 648, 794, 800
Copper Production, Chile 8, 794
Copper Production, Colorado 434
Copper Production, Germany 8, 794
Copper, Production, Great Britain 430, 794
Copper Production, Idaho 81
Copper Production, Italy 794
Copper, Production, Japan, 8, 103, 309, 794
Copper Production, Mexico 8, 794
Copper Production, Michigan 10, 804
Copper Production, Newfoundland 8, 794, 969
Copper Production, New South Wales 31
Copper Production, Norway 794
Copper Production, Peru 794
Copper Production, Portugal 794
Copper Production, Queensland 897
Copper Production, Russia 794
Copper Production, South America 8
Copper Production, Spain 8, 749
Copper Production, Sweden 794
Copper Production, Turkey 794
Copper Production, U. S. 3, 4, 8, 713, 794
Copper Production of the World 794
*Copper Production, Wyoming 122
Copper Pyrite, Lixiviating, Gin's Pat. 370
*Copper Range Con. Co., Report 850
Copper, Recent Literature on Geology of 525, 729, 1,050
"Copper Refining, Electrolytic" 485
Copper River Region, Alaska 76
Copper-Silver Process, Alzugaray 229
Copper Slimes in Electrolytic Refining 279
Copper Smelting, Early 994
Copper Smelting with Oil 615
Copper in South Africa 714, 812
"Copper Statistics" 526
Copper Stock Speculation and Gas Suits 547
Copper Sulphate 652
Copper Sulphate for Australia 977
Copper Sulphate Consumption, Algeria 461
Copper Sulphate Exports, Great Britain 141, 342, 502, 705, 866, 1,026
Copper Sulphate Exports, U. S. 57, 381, 542, 745 945
Copper Sulphate, Gin's Pat. 410, 530
Copper Sulphate Market Weekly
Copper Sulphate Market in 1903 57
Copper Sulphate Production, U. S. 4, 57
Copper Supplies 9, 66, 142, 222, 303, 382, 587, 668, 746, 827, 906, 1,027
Copper Wire Cable for Switchboards, Duty on 449
Copper and Zinc Electrolytic Extraction from Ores, Laszczynski's Pat. 694
Copperas 914
Copperas Production, U. S. 4, 5
Corinth Feldspar Mine, N. Y. 208
Cornara's Pat. Explosive Cartridge 974
Cornejo, Octaviano Silver Mines, Mex. 22
Cornell University Civil Engineers' Association "Transactions" 287
Cornwall, Mining in 200, 553
Cornwall Pitchblende Excitement 107
"Cornwall Royal Geological Society Presidential Address" 570
Cornwall, Tin-Dressing 108, 116
Correll's Pat. Locking-Latch for Doors of Coal Cars 449
Corundum Production, Canada 393, 648
Cosmopolitan Proprietary Mine, W. A., Low Cost of Mining 792
Costa Rica, Cyanidation in 635
Costa Rica Duties on Oil 838
Coste, Eugene, Canadian Bureau of Mining 674
Cothran's Pat. Brick Machine 1,054
Cottle's Pat. Artificial Fuel 289
Coulson's Pat. Safety Device for Hoisting Engines 210
*Council City & Solomon River Railroad, Alaska 77
Courtis, W. M., Breaking Up Furnace Sows 955
Cowles' Pat. Effecting Chemical Changes 170
*Cowles' Pat. Electric Furnace 170, 853
Cowles' Pat. Making Calcium Carbide 170, 854
Cox's Pat. Grinding Mill 974
Cox's Pat. Hydraulic Air-Compressor 774
*Cox's Pat. Miners' Drill 530
Craig, Kelly & Turner's Pat. Roasting Furnace 450
"Cranberry Iron Ore Deposits, N. C., Tenn." 286
Crane, Nickerson's Pat. 330
*Crane, W. R., Gypsum Plaster Industry 442
*Crane, W. R., Slime Treatment in the Joplin Region 683
Crapp & Finch's Pat. Brick Machine 369
Craven's Pat. Reducing and Separating Material 329
Creigh's Pat. Feeding Furnaces 410
Crescent Mine, Oregon 728
Cripple Creek, Colo., in 1903 40
Cripple Creek, Colo., Geological Survey, 136, 742, 775
Cripple Creek, Colo., Gold Production 38, 251, 419, 783, 942
Cripple Creek, Colo., Labor Troubles (See under Colorado Labor Conditions.)
Cripple Creek, Colo., Lease Royalties 336
Cripple Creek, Colo., Mine Tax 620
Cripple Creek, Colo., Mining Costs 70
Cripple Creek, Colo., Mining Dividends 38, 40
Cripple, Creek, Colo., New Gold Discoveries 267, 940
Cripple Creek, Colo., Ore Treatment Charges 536
Croatia, Mining in 398
Cronemeyer's Pat. Tin-Plate Catcher 290
Crook, A. R. on Molybdenite at Crown Point, Wash 74
Crosby, Fred, In Defense of Admiral Melville 849
Crosby, W. O., Geological History of the Hematite Iron Ores of New York. 286
Crossley's Pat. Conveyor 893
Crossley's Pat. Metal Casting Machine 893
Cross's Pat. Cyanide Making 130
*Crown Deep Stamp Mill 28
Crowning Glory Mine, Nev 759
Crown King Mines Co., Promoting 288
Crow's Nest Coal-Field, Mining in 601
Crow's Nest Pass Coal Co., Report 692
Crucible Furnace, Alzugaray's Pat. 654
Crucible Furnace, Morgan Crucible Co.'s Pat. 974
Crucible Furnace, Reynold's Pat. 774
Crucible Lids, Appleyard & Cranfield's Pat. 974
Crucible, Reynold's Pat. 774
Cruikshank's Pat. Artificial Fuel 529
Crusher, Boileau's Pat. 773
Crusher for Laboratory Use 325
Crusher, McCormick's Pat. 290
Crusher, Merison's Pat. 573
Crusher and Pulverizer, Williams's Pat. 734
*Crusher, Roll-Jaw, Sturtevant 123, 245
*Crusher, Sackett's Pat. 734
Crusher, Wall's Pat. 573
Crushing, Fine 572
Crushing and Grinding Mill, Dyer's Pat. 1,014
*Crushing and Grinding Mill, Sturtevant's Pat. 813, 934
Crushing Rolls, Dressing, Sturtevant's Pat. 853
Crushing Rolls, Edison's Pat. 250
Cryolite 794
Cryolite, Artifical, Duty on 329
Cuba, Tariff of 422
Cumming's Pat. Concrete and Metal Structure 933
Cunningham, A. C., "Movable Base" 809
Cunningham, Bryson, "Dock Engineering" 729
Cupel-Making Machine. Calkins's Pat. 370
Cupels, Morgan Crucible Co.'s Pat. 974
Curie, Mme. New Radio-Active Elements 362
Curie, S., Preparation of Radium Chloride 161
Curie, J. H., Management of West Australian Mines 236, 1,005
Curie, J. H., on Queensland Mining Methods 72, 73
*Curie, J. H., Recent Progress in Western Australia 275
Currency, Metallic, Use of 527, 650, 691
"Currency Report, U. S." 366
Cus, Geo. L., Bureau of Mining 851
Custodis's Pat. Coal Briquettes 370
Cyanidation in Arizona 34
Cyanidation in California 54
Cyanidation in Colorado 54
Cyanidation of Copper-Gold Tailings 797
Cyanidation of Copper Ores, Porter's Pat. 774
Cyanidation in Costa Rica 635
Cyanidation, Fine Grinding Previous to 952
Cyanidation in Idaho 34
Cyanidation, Improvements in 161, 314
Cyanidation in Montana 34
Cyanidation in Nevada 35
Cyanidation in New Mexico 35
Cyanidation in Oregon 35
Cyanidation of Sands 272, 392, 597
Cyanidation in South Dakota 33, 35
Cyanidation in U. S. 33
Cyanidation in Utah 35
Cyanide in Blast Furnace Flue Dust 994
Cyanide, Commercial 270
Cyanide, Estimation of Available 513, 961
Cyanide Filter, Webb's Pat. 574
Cyanide Imports, U. S. 57
Cyanide Making, Cross's Pat. 130
Cyanide Making, Kendall's Pat. 894
Cyanide Market Weekly
Cyanide Market in 1903 57
Cyanide and Nitrate, Everett's Pat. 489
Cyanide Process 754
Cyanide Process, Davis 272
Cyanide Process, De Keyser in British Columbia 452
*Cyanide Process, Hendryx 723, 955
Cyanide Process and Rand Mining 150
Cyanide Production, U. S. 57
Cyanide, Sodium 652, 892
Cyanide Solution, Assay of 997
Cyanide Solutions, Determination of Gold in 322
Cyanide Solutions, Precipitation of Copper from 791
Cyanide Solutions, Recovering Gold and Silver from, Christy's Pat. 614
Cyanide in the Stamp-Mill 765
Cyanide Tanks for South Africa 164
Cyanide Trade, South Africa 199
Cyanide of Zinc with Potassium and with Sodium 845
"Cyaniding Gold and Silver Ores" 771
Cyprus, Mining in 1,049

D

Dailey's Pat. Furnace Discharging 290
*Dake Motor 689
Dale, Samuel S., "Metric Failure in the Textile Industry" 166
Dalton's Pat. Bucket Elevator 574
Daly—Daly-West—Silver King Consolidation, Utah 147
Daly, Herbert J., "Gold Mines of Western Australia" 571
Daly-West Mg. Co., Utah, Milling 752
Daly-West Mg. Co., Utah, Report 488
Daly-West Mg. Co., Utah, as a Silver Producer 468
Damages Will be Limited to Terms of the Injunction 933
Damaraland, Guano Exports 381
Danneel, Heinrich, "Electro-Chemistry Year-book" 1,011
Danner's Pat. Miner's Lamp Holder 973
Danziger's Pat. Separating Iron Pyrite from Zinc Blende 489
D'Arcy Wentworth Mine Accident 390
Darling's Pat. Copper and Iron Alloys 530
Darrah & Patterson's Pat. Electric Lighting of Miners' Lamps 530
Darrow & Wood's Pat. Artificial Stone 249
Davidson's Pat. Making Briquettes 614
Davies' Pat. Galvanizing Metal Sheets. 90
*Davis Coal & Coke Co., Henry Colliery 277
Davis Cyanide Regeneration Process, 191, 272
Davis' Pat. Annealing Steel 573
Davis' Pat. Artificial Fuel 1,054
Davis' Pat. Bucket 974
Davis' Pat. Pierced Ingots 249
Davis' Pat. Pulverizing Rolls 1,014
Davis' Pat. Sawing Stone 813
Davis' Pat. Utilizing Waste Niter Cake. 1,014
*Daw Air Washer for Compressors 285
Daw's Pat. Air Reheater 450
Deady's Pat. Coal Excavator 489
Deane, C. T., Oil Industry of California 56
Dean's Pat. Air Compressor 410
*Dean's Pat. Electromagnetic Ore Separator 250
Deards, Copenhaver & Adelsperger's Pat. Grinding Mill 654
De Beers Con. Mines, Diamond Sales 148
De Beers Con. Mines, Report 165
Decker's Pat. Coal Breaker 734
Deed Conveying Mining Claims, Construction in Colorado 169
Deemer's Pat. Converting Crude Iron into Malleable Iron or Steel 654
De Kalb, Courtenay, Bureau of Mining 192
*DeKalb, C., Trapezoidal Slimes Agitator 241
De Keyser Electro-Cyanide Process in British Columbia 452
Delaney's Pat. Hoist and Conveyor 330
Delaware & Hudson Co., Report 571
*Delaware, Lackawanna & Western Company's Auchincloss Colliery 726
Delaware, Lackawanna & Western Railroad use of Copper on Ferry House. 228
Delaware, Lackawanna & Western Railroad Co., Report 448
Delprat Process for Mixed Sulphides 122
Delprat's Pat. Ore Treatment 974
Dempster's Pat. Manufacturing Gas 129
Dempsey's Pat. Metallurgical Furnace. 170
Denso, P., on Iridio-Platinum Anodes for the Electrolysis of Alkaline Solutions 1,037
De Normandie's Pat. Gold Saving Dam 974
*Denver Engineering Works Diagram of Horse Power for Ten-Stamp Battery 647
*Denver Fire-clay Co. Laboratory Ore Crusher 325
Derval's Pat. Regenerative Gas Furnace 1,014
Descubridora Copper Mg. Co., Mex. 22
Des Moineaux's Pat. Miner's Tool 370
*Detroit Copper Co., Ariz., Plant 679
Dettmer's Pat. Deep Boring 814
Dewar's Pat. Making Nickel Carbonyl. 894
Diamond Blue Ground 278
Diamond Coal Mine, Ind. 700
Diamond Concentration 996
Diamond Discovery, French Guiana 458
Diamond Draw-Plates, Krause's Pat. 250
Diamond Drill, Macnamara's Pat. 490
Diamond Drilling in an Arizona Copper District 888
Diamond Exports, British Guiana 138, 538, 701, 822
Diamond Mining in Brazil 893
Diamond Mining in South Africa, First Machinery Used in 714
Diamond Mining in South Africa, Peculiar Accident in 714
Diamond Mining in Transvaal 452, 857
Diamond Production of the World 634
Diamond Supply 594
Diamonds for Drilling 594
Diamonds, Setting, for Industrial Purposes, Krause's Pat. 654
Dibdin, W. J., "Photometry" 327
Dicke's Pat. Welding 329, 409
Dickerson's Pat. Safety Device for Mine-Shafts 89
Dickinson, Harold T., "Quarries of Bluestone and Other Sandstones in New York" 407
Diebold's Pat. Mine-Curtain Raiser 614
Dierdorff's Pat. Mining Machine 289
Diescher, Alfred, Furnace 274
*Digger, Triumph 524
*Digging and Loading Machine, McDonald's Pat. 489
Diller, J. S., "Copper Deposits of the Redding Region, Cal." 729
Diller, J. S., "Mining and Mineral Resources of Redding Quadrangle, Cal." 729
Dillon-Mills, S., Electroscope for Radio-Active Minerals 955
*Ding's Pat. Electro-Magnetic Separator 529
Discharging Loose Cargo from Vessels, Shoosmith's Pat. 520
Discussion, Value of 951
Dissolving Substances, Rider's Pat. 89
Dividends Weekly
Dividends in 1903 68
Dividends, Cripple Creek Mines 38, 40
Dividends, Review of 187, 348, 550, 711, 872
Dividends, Transvaal Mining 28
Dividends, Western Australia Mining 411
Doble's Pat. Nozzle for Impact Water-Wheels 290
Dobson's Pat. Peat Harvesting Machine 773
"Dock Engineering" 729
Dodge's Pat. Chain 894
Dodge's Pat. Pan Conveyor 129
Dodge's Pat. Storage 530
Dolezalek, Friedrich, "Theory of the Lead Accumulator" 848
*Dominian, Leon, Notes on a Trip to White Oaks, N. M. 799
Dominion Coal Co., Ltd., Report 931
Donetz Coal Basin, Russia 688
Door for Hopper Cars, Stucki's Pat. 350
Doremus's Pat. Making Hydrofluoric Acid 529
Dorr & Lundberg Cyanide Mill, S. D. 45
Dorr's Pat. Fuel 406
Doss's Pat. Coke Puller 654
Douglas, James, Copper Mining in the Southwest 10
Douglas, James, Wastes in Mining and Metallurgy 718, 798
Dow's Pat. Making Bromine 330
Dow's Pat. Molding Building Blocks 409
Drafting, Cost of for Iron and Steel Structural Work 82
Drake's Pat. Excavator 409
Drawing Articles from Molten Baths, Byrnes's Pat. 209
Dreckmann & Marx's Pat. Working Mine Doors 250
Dredge Anchor, Sherwood's Pat. 1,054
Dredge Attachment, Funke's Pat. 814
Dredge, Boschke's Pat. 654
*Dredge, Gold Mining for Heavy Work. 525
*Dredge, Gold Mining of Recent Design. 477, 925
Dredge, Gold Mining in Siberia 917
Dredge, Newman's Pat. 329
Dredge, Osgood's Pat. 290
Dredge Screen, Libnitz's Pat. 734
Dredge, Smyth & Bowers' Pat. 128
Dredge Tailings for Agricultural Purposes 150
*Dredge, Types of 82
*Dredging for Gold 82
Dredging for Gold in California 38, 656, 816, 855, 895, 976, 1,055
*Dredging for Gold in Montana 846

Dredging for Gold in New Zealand..82, 198, 658
Dredging for Gold in New Zealand, Dividends from 309
Dredging for Gold in Oregon..... 728
Dredging for Gold on Stewart River, Alaska 107
Dredging for Gold Under Difficult Conditions 476
Dredging for Gold in Victoria..... 657
*Dredging for Platinum in the Ural Mountains 762
Dredging and Sluicing, Riley's Pat.... 489
Dreber's Pat. Making Compound of Titanic and Lactic Acids 854
Dreber's Pat. Neutralizing Titanium Salts 130
Dreber's Pat. Recovering Titanic Acid. 130
Dresser, John A., New Copper-Bearing Area in Quebec 483
Drill Bit Fastening Device, Brintzinghoffer's Pat. 490
*Drill Bits 724, 758
Drill Chuck, O'Brien's Pat.....1,014
Drill Holder, Kimball's Pat..... 934
Drill Holder, Summons' Pat..... 490
Drill Holes, Ejecting Rock from..... 653
*Drillibite 244
Drilling, Diamond, in an Arizona Copper District 888
*Drilling Match in Korea..... 357
Drill, Marvin Electric 891
Drill Point, Timmins & Englerest's Pat. 814
Drill Repairing Machine, Brossoit's Pat. 530
Drill Sharpener, Morgan's Pat. 774
Drill Sharpener, Purser, Millar & Jenkins' Pat. 170
Drill, Stone's Pat..... 934
*Drinkwater Mines, Nev..... 759
Drying Blast, Gayley's Pat..... 130
Drying Kiln, Meyer's Pat.....1,053
Drying Ore, Baum's Pat..... 130
Ducktown Sulphur, Copper & Iron Co., Pyrite Smelting 832, 837
Duff Gas Producers 634
*Duffield, M. S., Outlook for Mining in New Territory Opened up by the San Pedro, Los Angeles & Salt Lake Railroad 115, 155, 201
Duffield, T., "Short Review of Mining Operations in South Australia in 1903" 689
Duisburger Machinenbau Co.'s Pat Rock Drill Exhaust 250
Duke's Pat. Deep Well Pump Valve.... 289
Duluth Mining Stock Market..... 179
Duluth, Mining Stock Quotations....Weekly
Duluth Tar Co., Minn. By-Product Coke Oven Plant..... 354
Dumars's Pat. Separating Liquid Air into Oxygen and Nitrogen..... 129
Dumm's Pat. Making Concrete Brick... 409
Dump-Car Discharging Device, Seaver & Hulett's Pat. 490
Dump Car, Giesecke's Pat..... 933
Dump-Car, Harrison's Pat..... 733
Dump-Car, Hart & Meissner's Pat..... 973
Dump-Car, King's Pat..... 694
Dump-Car, Meissner's Pat.....409, 489
Dump-Car, Shaw's Pat..... 654
Dump-Car, Shelton's Pat..... 450
Dump Coke Car, Hansen's Pat..... 330
Dumping Device, Automatic Bucket, McKinnon's Pat. 734
Dumping Elevator, Van Cleave's Pat... 250
Dunn's Pat. Artificial Stone..... 489
Dunstan's Pat. Mine Car Attachments.. 410
Dunton's Pat. Circulating Liquids in Tanks 734
Durham's Pat. Blasting Cartridge..... 129
Durkee's Pat. Rock Drill Bit..... 130
Durkee's Pat. Rock Drilling Engine.... 933
Dust from Blast Furnaces—A Nuisance 508, 548, 573
Dust Chamber, Cazin's Pat..... 934
Dutch East Indies, Gold Production.... 6
Dutch East Indies, Mineral Resources.. 598
"Dutch East Indies, Mines Report"... 326
Dutch East Indies, Tin Production.... 18
Dutch East Indies, Tin Sales..... 19
Dutch Guiana, Gold Production.....6, 298
Dutch West Indies, Phosphate..... 102
Dyer's Pat. Crushing and Grinding Mills 1,014
Dynamite Combination 57
Dynamite Industry, California..... 291
Dynamite Industry, U. S..... 279
"Dynamo-Electric Machinery" 770

E

Eackle, Arthur S., Luminescent Zinc-Blende 1,000
Eackle, Arthur S., "Mineral Tables"... 286
Eames, Richard, Jr., Gold and Copper Mines of the South..... 37
Easton, Stanly A., Coeur d'Alene..... 13
Earth, Age of.....1,038
East Africa, Soda Deposits..... 342
Eastwood's Pat. Controlling System for Conveyors 90
Eckel, Edwin C., Recent Literature on Geology of Iron Ores and Ocher..286, 485, 688
Eckel, Edwin C., Recent Literature on Geology of Manganese Ores..... 809
Eckel, Edwin C., Recent Literature on Geology of Phosphate and Gypsum... 610
Eckel, Edwin C., Recent Literature on Geology of Salt, Gypsum and Borax.. 406
Ecuador, Gold Production..... 6
Edgar Zinc Co., Kansas Plant..... 518
Edison Nickel-Iron Battery..... 281
Edison's Pat. Burning Cement Clinker.. 813
Edison's Pat. Crushing Rolls..... 250
Edison's Pat. Magnetic Separator...490, 813
Education, Mining, on the Rand..... 388
Education, Technical.....596, 876, 916
Educational Method on Geology..... 672
*Edwards, Henry W., Concrete Work About Mines..... 805
Edwards, Henry W., Smelting at Sudbury 352
*Edwards' Mechanical Ore-Roasting Furnace 242
Edwards' Pat. Conveyor.....1,054
Edwards' Pat. Cutting Metal Bars..... 693
Edwards' Pat. Feeding Device for Billet-Heating Furnaces..... 653
Edwards' Pat. Feeding Device for Gas Producers 653
Edwards' Pat. Rolling Mill..... 894
Edwards' Pat. Sawing Mining Timbers.. 410
Eggers' Pat. Fuel Briquettes..... 90
Egypt, Gold Mining.....150, 965
Eichhorn, Walter, Mining Opportunities in Bolivia..... 447
Ejection Suit, Right to Bring Where Payments are not Made..... 128
"Elders Ridge Coal Field"..... 848
"Electric Club Journal"..... 327
Electric Drill, Marvin..... 891
"Electric Furnace"..... 930
Electric Furnace, Contardo's Pat..... 210
*Electric Furnace, Cowles's Pat..... 170
Electric Furnace, Galbraith & Steuart's Pat 1,014
Electric Furnace, Horry & Price's Pat.. 694
Electric Furnace, Keller's Pat.....489, 854
Electric Furnace, Price's Pat..... 694
Electric Furnace, Schneider's Pat..894, 1,054
Electric Furnace, Sjostedt's Pat.....1,054
Electric Furnace, Stevens & Timmerman's Pat.....130, 734
Electric Haulage in Metal Mines..... 324
Electric Haulage for Mines, Advice on.. 558
Electric Heating, Price's Pat.....330, 694
Electric Hoisting Engines.....1,033
Electric Lamp for Mines, Société des Accumulateures, Chelin's Pat..... 614
"Electric Lighting"..... 327
*Electric Mine Hoist, Lidgerwood..... 365
Electric Mine Hoists in Germany..... 886
*Electric Mine Hoists, Siemens-Ilgner...1,046
*Electric Motor Larry..... 398
*Electric Plaster Company's Mill, Kas.. 442
Electric Power in Japan..... 558
*Electric Pump, Blake-Knowles High-Speed 1,010
Electric Refining of Iron, Société Electro-Metallurgique Francaise's Pat..... 330
Electric Separator, Perry's Pat..... 853
Electric Smelting of Complex Sulphides. 479
Electric Smelting, Cowles's Pat..... 853
Electric Smelting, General Electric Co.'s Pat, ... 90
Electric Smelting of Iron Ore in Europe, Canadian Government Investigation of. 171, 187, 656, 776, 846
*Electric Steel Furnace at Gysinge, Sweden 967
Electrical Apparatus for Working Reciprocating Tools, Williamson & Sumpter's Pat..... 854
*Electrical Blue-Printing Machine..... 485
Electrically Driven Rolling Mill..... 518
"Electrically Driven Shops"..... 286
Electrically Igniting Miners' Lamps, Best's Pat..... 410
Electricity vs. Compressed Air..... 486
"Electricity in Mines in Great Britain". 366
Electricity at Pennsylvania Coal Mines. 873
"Electricity, Static, Text-Book on"..... 809
Electricity or Steam for Hoisting..... 881
Electricity, Unusual Accident from at Bingham, Utah.....871, 874
Electricity in Witwatersrand Mines..... 884
Electro-Chemistry, Advance of..... 997
"Electro-Chemical Yearbook".....1,011
"Electro-Chemists' Calendar"..... 167
Electrode, Atkins's Pat.....410, 450
Electrode, Chemische Fabrik Griesheim Elektron's Pat.....1,054
Electrode, Hager's Pat..... 129
Electrode, Wedekind & Rorschke's Pat. 893, 974
Electrolytic Analysis of Gold..... 553
Electrolytic Apparatus, Blackmore's Pat. 814
Electrolytic Cell, Ashcroft's Pat..... 210
"Electrolytic Copper Refining"..... 485
Electrolytic Decomposition of Alkali Chlorides, Rink's Pat..... 129
Electrolytic Deposition, Jory's Pat..... 693
Electrolytic Extraction of Metals, Cassel's Pat..... 169
Electrolytic Extraction of Metals, Mechwart, Coltri & Co.'s Pat..... 410
Electrolytic Iron..... 846
Electrolytic Production of Zinc 772
Electrolytic Refining of Metals, Schwarz's Pat..... 853
Electrolytic Separation of Cobalt and Nickel 30, 363
Electrolytic Treatment of Zinc Sulphides 876
"Electro-Magnetic Machinery, Testing". 166
*Electro-Magnetic Separator, Dings' Pat. 529
Electro-Magnetic Separator, Oviatt & Dean's Pat..... 249
"Electro-Metallurgy"..... 570
"Electro-Metallurgy of Alkali Metals".. 446
*Electro-Metallurgy of Iron, Harmet's Pat. 209
Electroscope for Radio-Active Minerals. 955
Elements; Verified and Unverified..... 282
Elevator, Willdey's Pat.....90, 236
Eliot, Pres., on Personal Freedom..... 808
*Elk Lick Mines, Pa..... 159
Ellershausen Zinc Process.....1,052
Elliott's Pat. Pump..... 854
Ellis' Pat. Aluminum Solder..... 894
Ellis, R. W., "Asbestos"..... 326
Ellis & Flanigan's Pat. Soldering Aluminum 1,054
Elmore Copper Works, Schladern, Germany 197
Elmore Oil Concentration on Copper Ores 283, 611
Elmore Oil Concentration Process in British Columbia 372, 373, 576, 616
Elmore's Pat. Oil Concentration..... 170
*El Oro, Mexico.....21, 22
El Paso Con. Gold Mg. Co., Colo., Report 1,052
El Paso Drainage Tunnel, Colo.....38, 40
*Elspass Quartz Mill..... 649
Ely, Anderson & Slick's Pat. Adjusting Mechanism for Sheet Mills..... 694
Ely Mine, Vt., Geology of..... 677
"Emerald Book"..... 770
Emeralds 550
Emerson's Pat. Separator..... 129
Emery 634
*Emery's Pat. Coal Separator..... 530
Emery's Pat. Protecting Material for Iron Work..... 89
Emmons, S. F., Theories of Ore Deposition Historically Considered....117, 157, 199, 237
Emmons, S. F., "United States Geological Survey Contributions to Economic Geology".....729, 770
*Emmons, S. F., Virginius Mine..... 311
Employer and Employee, What Law Requires in Respect to Care Between.... 488
"Employment Offices, Free in U. S. and Foreign Countries"..... 166
Encampment Copper Deposits, Wyo.....1,008
"Encampment Copper Region, Wyo.".. 525
Encuentros Mines, Salvador, Equipment.1,048
Englehardt, Victor, "Electrolysis of Water" 326
Englehardt, Victor, "Electrolytic Refining of Copper"..... 729
Engels' Pat. Lead Ore Treatment..... 529
Engels' Pat. Steel Making.....329, 330, 654
Engine and Compressor Combined, Reeve's Pat..... 654
Engine, Rotary, Turner's Pat..... 934
Engineering Education, Society for Promotion of, "Proceedings".....1,011
"Engineering and Mining Journal"..... 67
Engineering Building..188, 284, 388, 428, 430, 672
Engineering, Modern..... 270
"Engineers and Electricians, Twentieth Century Handbook for"..... 650
Engineers as Presidents..... 755
"Engineers' Manual".....1,050
England, Exploration for Coal in..... 916
Englund's Pat. Oil Reservoir..... 129
Enock, C. Reginald, Mining in Peru.. 167, 810
Ensley Steel Plant, Ala..... 390
Etheridge, R., Jr., "Carboniferous Fossils from Gascoyne District"..... 485
Etheridge, R., Jr., "Cretaceous Invertebrate Fauna"..... 526
Etruscan Copper Estates Co..... 348
*Eureka Collieries..... 879
Evans' Pat. Mine Car Coupling..... 330
Everette's Pat. Making Cyanides and Nitrates 489
Excavating-Shovel, Page's Pat..... 734
Excavator, Drake's Pat..... 409
Excavator, Hoover & Mason's Pat..... 774
Excavator, Jackson & Adkins' Pat..... 934
Excavator, Mahoney's Pat..... 409
Excavator, Moran's Pat..... 489
Excavator, Peach's Pat..... 529
Excavator, Quartier's Pat..... 369
Excavator, Scanlan's Pat.....1,013
Excavator, Snider's Pat..... 814
Excavator, Snyder's Pat..... 814
*Excavator, Triumph..... 524
Exploration Co., Working of.....153, 266
Explosive, Brock's Pat..... 734
Explosive Cartridge, Cornara's Pat..... 974
Explosive Compound, Arnold's Pat..... 694
Explosive, Orsman's Pat..... 774
Explosive, Poetter's Pat..... 290
Explosive, Steele's Pat.....1,013
*Exposed Treasure Mine, Cal., Trapezoidal Slimes Agitator at..... 241
Extra-Lateral Rights, Celebrated Decision in Idaho.....912, 936
Extra-Lateral Rights—Exploring for Vein 812

F

Face Mask, Pollard's Pat..... 410
"Factory Manager and Accountant"..... 326
Fahrig's Pat. Ore Treatment..... 613
*Fairbanks, Morse & Co., Elspass Quartz Mill 649
Fairburst's Pat. Unloading Device for Air Compressors..... 694
*Falding's Pat. Roasting Furnace..... 614
Falk's Pat. Metallurgical Furnace Attachment 693
Fallows' Pat. Purifying Phosphoric Acid 734
Falun Gold Mine, Sweden..... 281
"Farm Labor Wages in U. S."..... 126
Farmer, George, on Electric Haulage for Mines 558
Farnham's Pat. Water Proofing Porous Material 128
Farrell's Pat. Water Jacket Furnace... 934
Farrington, Oliver Cummings, "Gems and Gem Minerals".....286, 726
*Fassett, C. M., Hendryx Cyanide Process 723
Fauck's Pat. Rock Drilling Machine.... 128
*Faulds, Alexander, Construction of Mine Dams..... 965
*Faulting in the Globe District....802, 913
Faults and Lode-Structure..... 792
Federal Mg. & Sm. Co., Consolidating Utah Mines..... 147
*Feeding Device, Mechanical, Sturtevant's Pat..... 733
Feeding Device, Wheildon's Pat..... 614
Feldspar Mine, Corinth,. N. Y..... 208
Feldspar Production, Canada...393, 648, 800
Fenneman, N. M., "Structure of Boulder Oil-Field, Colorado"..... 930
Ferraz, Luiz, "Report on Auriferous Deposits of Palma Mines Geraes, Brazil" 689
Ferrell, Joseph L., on Preservation of Wood 1,003
Ferris, Chas. E., "Manual for Engineers" 1,050
Fiddes' Pat. Gas-Retort Charger and Discharger 613
"Field Columbian Museum, Geological Series of"..... 286
"Field Columbian Museum Report"..... 890
Filing Current Information.....247, 288
Filter for Leaching Tanks, Telluride Reduction Co.'s Pat.....1,054
Filter Press, Hack's Pat..... 129
Filter Press Treatment of Slimes..... 591
*Filter-Pressing in Western Australia.. 602
Financing Mines.....153, 675
Finch, John W., "Circulation of Underground Aqueous Solutions and the Deposition of Lode Ores".....809, 970
"Findon's Copper Section, Mount Darwin" 526
"Finland Geological Commission"..... 610
Fire-Brick, Bach's Pat.....1,014
Fire-Brick, Shupert's Pat..... 934
Fire-Clay and Kaolin as Minerals..... 773
Fire-Clay Production, Canada..... 393
Fire-Damp Explosion Due to Rotten Timbers 390
Fire-Damp Explosions in Salt Mines.... 714
Fire-Proof Building Block, Illemann's Pat. 410
Fire-Proofing Solutions, Baxter's Pat... 973
Fire-Proof Material, Kruger's Pat..... 249
"Fish and Fisheries Report"..... 809
Fisher's Pat. Hydraulic Press..... 290
Fitch's Pat. Coal Tipple..... 694
Flagstone Production, Quebec..... 800
Flame Temperatures..... 166
Fleming's Pat. Refining Oil..... 169
Fletcher, William, "English and American Steam Carriages and Traction Engines" 770
Flint 914
Flint Production, Great Britain..... 430
Flint & Whitney's Pat. Mine Trap-Door 1,014
Flitters, Duty on..... 449
Flood's Pat. Mould for Brick Machines. 169
Florida, Large Phosphate Rock Order.. 262
Florida, Phosphate Freight Rates..... 263
Florida, Phosphate Industry...182, 381, 423
Florida, Phosphate Production.....58, 182
Florida, Phosphate Shipments..58, 102, 141, 182, 263, 461, 585, 667, 826, 905, 1,026, 1,066
Florida, Phosphate Trade..... 285
Flue Dust, Reclaiming, Johnson's Pat... 250
Flue Dust Separating from Gas, Riddell's Pat..... 529
Flugstad's Pat. Acetylene Gas Generator 410
Fluid-Pressure Regulator, Scott's Pat..1,014
Flume, Flow of Water in..... 289
Fluorides and Silicates, Making, Mills' Pat. 530
"Fluorspar, Lead and Zinc Deposits of Western Kentucky"..... 366
Fluorspar Production, Great Britain.... 430
Fluorspar Production, U. S.....4, 5
Flux, Norman's Pat..... 973
Flux, Todd's Pat..... 170
Flux, Wherry's Pat..... 210
Foglesong's Pat. Coal Mining Machine.. 529
Foley, E. H., Marvin Electric Drill.... 891
Foniakoff, Antonin, Gold Dredges in Siberia 917
Ford & Allen's Pat. Roll-Grinding Apparatus 210
Foreclosure on Mining Property in Utah. 249
"Forester Report for 1903"..... 126
Forging, Baker's Pat..... 530
Forging Machine Combination Die, Jeffrey's Pat..... 654
Forging Suspender, Galloway's Pat..... 329
Foshee's Pat. Conveyor..... 409
*Foster, Clement Le Neve.....632, 1,037
Foster, C. Le Neve, "Elements of Mining and Quarrying".....286, 366
Foster's Pat. Suspension Device for Two-Rope Buckets..... 169
"Foundry Nomenclature".....88, 809
Fowler, S. S., British Columbia..... 24
Fox's Pat. Well Drill..... 249
Foy's Pat. Ingot Handling-Machine.... 129
"Frameries Accident Office"..... 526
*Framing of Rectangular Shaft Sets... 396
France, Bank Statement.....Weekly
"France, Bureau of Longitudes Annual" 88
France, Coal and Coke Imports and Exports 420
France, Coal Companies; Profits..... 958
France, Coal Production.....299,420
France, Electric Iron Smelting in..... 776
France, Gold and Silver Movement....7, 586
France, Iron and Steel Production..... 569
"France, Mineral Statistics"..... 446
France, New Coal Discovery..... 241
France, Zinc Production..... 308
Frankenfield, Budd, "Testing Electromagnetic Machinery" 166
"Franklin Furnace, N. J., Zinc and Manganese Deposits"..... 365
Franklin's Pat. Casting Process..... 89
Frasch's Pat. Recovering Nickel Hydroxide 1,054
Fraudulent Mining Schemes, Legal Advice on.....1,034
Freedom, Personal..... 808
Freeland, W. H., Smelting of Raw Sulphide Ores at Ducktown..... 837
Freiberg 3
"Freiberg Mining Academy, Prof. Ledebur's Inaugural Address"..... 126
French Guiana, Diamond Discovery..... 458
French Guiana, Gold Mining.....6, 117, 458
French Guiana, Platinum Discovery..... 458
French Indo-China, Nickel Discovery... 14
*Friction Clutch, New..... 206
*Friedrich, K., Laboratory Work Under Smelting Conditions..... 478
*Friedrich Wilhelm Colliery Shaft, Repairing 889

Frost's Pat. Water Elevator..... 289
Fuel, Artificial, Carpenter's Pat..... 653
Fuel, Artificial, Cottle's Pat..... 289
Fuel, Artificial, Cruikshank's Pat..... 529
Fuel, Artificial, Davis's Pat.....1,054
Fuel, Artificial, Dorr's Pat..... 409
Fuel, Artificial, Hollister's Pat.....1,014
Fuel, Artificial, Howard's Pat..... 250
Fuel, Artificial, Moscovitz's Pat..... 614
Fuel, Artificial, Thomas' Pat..... 574
Fuel Briquette, Egger's Pat..... 90
Fuel Briquettes, California..... 631
Fuel, Burning, Schutz's Pat..... 250
*Fuel, Liquid, Science of Burning..... 771
Fuel, Smokeless, Weeple's Pat..... 814
Fulkerson vs. Chisna Mg. & Improvement Co..... 128
Fuller's Earth Imports, New York..... 221
Fulton, Charles H., Cyanidation in U. S. in 1903..... 33
Fulton, Charles H., Davis Cyanide Regeneration Process..... 272
Fulton, Charles H., Pyrite Smelting.... 353
Funke's Pat. Dredge Attachment..... 814
Furnace, Best's Pat..... 934
Furnace, Blast for..... 652
Furnace Discharging, Dailey's Pat..... 290
Furnace Door Frame and Dead-Plate, Wright's Pat..... 973
Furnace Feeding Attachment, Creigh's Pat. 410
Furnace, Grondal's Pat..... 410
Furnace Heat, Avoiding Loss of, Kurzwernhart's Pat..... 894
Furnace, MacKay's Pat..... 249
Furnace, New Induction Draught, in Western Australia..... 657
Furnace Sows, Breaking Up.....852, 955
Furnace, Water Jacket, Farrell's Pat.. 934

G

Gaines' Pat. Metallurgical Furnace Attachment 813, 854
Galbraith & Steuart's Pat. Electric Furnace 1,014
*Galena Sludge Mill, Kas..... 683
Galicia, East Oil-Field..... 555
Galicia, Ozokerite Industry..... 398
*Gallitzin Plant, Pennsylvania Coal & Coke Co..... 398
Galloway's Pat. Forging Suspender..... 329
Galloway's Pat. Mine Car Coupling.... 210
Galvanizing Metal Sheets, Davies' Pat. 90
"Galvanoplastik" 770
Gandolfo's Pat. Mixer..... 773
Garchey's Pat. Making Glass Stone..... 410
Gardiner's Pat. Pneumatic Blower..... 290
Gardner's Pat. Promoting Flow in Oil and Gas Wells.....1,014
Garnets in North Carolina..... 634
Garnets in South Africa..... 634
Garretson's Pat. Blast Furnace Water Jacket 814
Garretson's Pat. Matte Smelting..... 814
Garrison, F. Lynwood, Bureau of Mining 234
*Garrison, F. Lynwood, Preparation of Brown Hematite Iron Ores..... 962
Garroway's Pat. Making Sulphuric Anhydride 490
Gas 270
Gas Apparatus, Beardsley's Pat..... 169
Gas and Coke Retort, Kloman's Pat.... 489
Gas Compressor Stuffing Box, Braungart's Pat..... 814
Gas Condensing Bodies, Producing, Tissier's Pat..... 813
Gas Engine, Efficiency of..... 268
Gas Engine, Seitz's Pat..... 934
Gas Engines for a Pumping Plant..... 150
Gases, Desulphurizing, Burschell's Pat.. 774
*Gases, Filtration of, Stone's Pat..... 733
Gases, Treating, Pauling's Pat..... 773
Gas Fired Boiler, Sahlin's Pat..... 449
Gas Generating, Bates' Pat..... 128
Gas Generator, Mattes's Pat..... 894
Gas Making, Dempster's Pat..... 129
Gas Making, Koneman's Pat..... 129
Gas Making, Lowe's Pat..... 249
Gas Making, Naef's Pat.....169, 409
Gas Obtaining from Wells, Cooper's Pat. 370
"Gas and Oil Engines".....167, 446
Gas and Oil, Recent Literature on Geology of..... 930
Gas Producer, Feed Device, Edwards' Pat. 653
Gas, Producer, from Anthracite Culm... 563
Gas Producer, Gayner's Pat..... 90
Gas Producer, George's Pat..... 89
Gas Producer, Hopper Feeding Device, Knox's Pat.....1,053
*Gas Producer Plant, Nacozari, Mex.... 359
Gas Producer, Reuleaux's Pat..... 734
Gas Producer, Sanderson's Pat..... 573
Gas Producers, Large..... 634
Gas Producer, Wight & Hyatt's Pat.... 409
Gas Producer, Wilson's Pat.....1,013
"Gas Production in 1902"..... 446
Gas Production, Canada.....393, 648
Gas Production, U. S..... 394
Gas Purifying, Jas' Pat..... 490
Gas Purifying, Winand's Pat..... 894
Gas-Retort, Agramonte's Pat..... 614
Gas-Retort Charger, Fiddes' Pat..... 613
Gas-Retort Charger, Saltar's Pat..... 574
Gas-Retort, Hartman's Pat..... 90
Gas from Salt Mines, Used for Lighting the Workings..... 550
Gas Suits and Copper Stock Speculation. 547
Gas, Transportation by Pipe-Lines..... 209
Gas, Utilization of..... 550
Gas in Water Wells in California..... 976
Gate and Chute for Coal Pockets, Holmes' Pat. 330
Gate for Ore Pockets, Hoover & Mason's Pat. 370
Gathmann's Pat. Distilling Oil..... 573
*Gayley, James..... 470
Gayley, James, Effect of Gaseous Contents on Pig Iron..... 609
Gayley's Pat. Drying Blast....90, 130, 574
Gayner's Pat. Gas Producer..... 90
"Gems and Gem Minerals".....286, 729
General Chemical Co., Report..... 246
General Electric Co.'s Pat. Electric Smelting 90
Geodetical Instrument, Grubb's Pat..... 369
"Geologic Processes and Their Results".1,050
Geological Society of America, Meeting. 73
"Geographical Position, Finding the Locus of, and the Compass Error"..... 246
"Geology, Economic"..... 486
Geology, Economic, Recent Literature on..286, 326, 365, 406, 445, 485, 525, 570, 610, 649, 688, 729, 770, 809, 848, 930, 970, 1,011, 1,050
"Geology, Economic, United States Geological Survey Contributions to".729, 770
Geology, Educational Method in..... 672
"Geology, New, and Vein Formation".. 890
"Geology, Progress in"..... 207
Geology, Stratigraphical..... 401
George's Creek Miners' Wages, Md.... 700
George's Pat. Gas Producer..... 89
George's Pat. Rolling Mill..... 853
Georgia, Bauxite Production..... 123
Georgia, Gold and Silver Production.... 5
"Georgia Manganese Ore Deposits, Geological Relations of"..... 809
"Georgia, Manganese Ores of the Cartersville District"..... 809
Georgia, Yellow Ocher Deposits of Cartersville District..... 688
Gerdes' Pat. Maturing Cement..... 409
German East Africa, Mineral Wealth of. 930
German Kali Syndicate.....262, 508
Germany, Ammonium Sulphate..... 846
Germany, Bank Statement.....Weekly
Germany, Cement Industry..... 952
Germany, Chemical Exports to U. S.... 625
*Germany, Coal Briquette Industry..... 562
Germany, Coal and Coke Imports and Exports.....299, 500, 623, 864
Germany, Coal and Coke Production..51, 623, 824
Germany, Coal Mining Cost..... 804
Germany, Coal Syndicate..... 107
Germany, Copper Imports and Exports.. 343, 867
Germany, Copper Production.....8, 794
Germany, Electric Mine Hoists in..... 886
Germany, Gold Movement..... 667
Germany, Gold Production..... 6
Germany, Iron Consumption..... 728
Germany, Iron and Steel Imports and Exports 379, 728, 865
Germany, Iron and Steel Production..47, 187, 269, 349, 434, 557, 644, 649, 728, 766
Germany, Iron and Steel Syndicate..228, 569, 792, 824, 842
Germany, Lead Imports and Exports.. 344, 867
Germany, New Lead-Zinc Deposit in.... 445
Germany, New Oil Briquette in..... 567
Germany, New Oil Company in..... 361
Germany, Nickel Imports and Exports.. 868
Germany, Oil Imports..... 969
Germany, Oil Production..... 688
Germany, Potash Industry..262, 422, 508, 798, 1,034
Germany, Quicksilver Imports.....344, 868
Germany, Russian Iron Ore in..... 845
Germany, Salt Combination..... 585
Germany, Superphosphate Manufacture in 326
Germany, Tin Imports.....344, 867
Germany, Tin Scrap Consumption..... 634
Germany, White Lead Combination..... 874
Germany, Zinc Consumption..... 788
Germany, Zinc Imports and Exports.. 344, 868
Germany, Zinc Production..... 308
Gerwig's Pat. Brick Re-Press..... 973
Gesner's Pat. Metallurgical Apparatus.. 574
Gibbs' Pat. Hydrocarbon Furnace..... 974
Gibson, Charles G., "Murchison Goldfield, W. A."..... 207, 446
Gibson, Thos. W., Ontario..... 23
Giesecke's Pat. Dump Car..... 933
Giglio & Zaouche's Pat. Agglomerating Compound 250
Gillette Bill and California Hydraulic Mining 308
Gillies-Payne Copper Process..... 362
Gilmer's Pat. Distillation of Wood..... 530
Gilmour & Lindsay's Pat. Tempering Cast-Iron 573
Gilpin, E., Jr., "Mineral and Crown Land Grants in Nova Scotia"....126, 406
Gilpin County Mining, Colo. in 1903..... 39
Gin's Pat. Copper Sulphate Treatment.. 410
Gin's Pat. Electrolytic Manufacture of Iron Alloys..... 449
Gin's Pat. Lixiviating Copper Pyrite... 370
Gin's Pat. Making Copper Sulphate.... 530
Girard Estate, Anthracite Collieries of.. 682
*Glacier Creek Hydraulic Elevator, Nome 77
Glass Stone Making, Garchey's Pat..... 410
*Glasser, C. H., Bessemer Copper Converters 437
*Glasser, C. H., Converter Accessories.. 519
Glasser, M., on Cost of Making Nickel from New Caledonia Ores..... 727
"Globe Copper District, Ariz."......446, 525
*Globe District, Arizona..... 839
Globe District, Ariz., First Mining in.. 568
*Globe District, Faulting in.....802, 915
Glogner's Pat. Graphite Separation..... 854
Godshall, L. D., Pyrite Smelting..... 194
Goerz, A., & Co. and the British Income Tax 468
*Goffe, E., Causes of Explosions in Air Compressors 686
Gold, Cost of Producing on Witwatersrand 1,042
Gold in Basic Igneous Rocks in Southeastern Russia..... 522
Gold Coinage, San Francisco Mint..... 451
Gold-Copper Tailings, Cyanidation of... 797
Gold in Cyanide Solutions, Determination of..... 322
Gold Deposits, Kalgoorlie..... 326
Gold Deposits, Turkestan..... 548
Gold Discovery, First, in California.... 110
Gold Discovery, First, in Colorado..... 674
*Gold Dredge, Design for..... 477
*Gold Dredge for Heavy Work, Allis-Chalmers 525
*Gold Dredge of Recent Design, Jeffrey 925
*Gold Dredge, Types of..... 82
Gold Dredges in Siberia..... 917
Gold Dredging, California.....38, 656, 816, 834, 855, 895, 976, 1,055
*Gold Dredging and Equipment for..... 82
Gold Dredging, Montana.....42, 846, 1,055
Gold Dredging, New Zealand...82, 576, 658
Gold Dredging, Oregon..... 728
Gold Dredging on Stewart River, Alaska 107
*Gold Dredging Under Difficult Conditions 476
Gold Dredging, Victoria..... 657
Gold, Electrolytic Analysis of..... 553
Gold Exports..462, 503, 706, 746, 787, 792, 826, 867, 906
Gold Exports, Australia.....7, 108, 142, 263
Gold Exports, British Guiana..138, 538, 701, 822
Gold Exports, Korea.. 355
Gold Extracting from Rebellious Ores, Broadwell's Pat..... 410
Gold Extracting from Sea Water, Peat's Pat..... 370
"Gold Extraction Methods on Witwatersrand" 729
*Gold-Field, Kolar, Geology of....238, 268
Gold-Fields, Tierra del Fuego..... 429
Gold in Gypsum..... 956
Gold Imported Must be Entered and Invoiced 733
Gold Imports and Exports, Germany.... 667
Gold Imports, San Francisco..... 867
"Gold Industry of Transvaal"..... 770
Gold Mine of Falun, Sweden..... 281
Gold Mine Investments..... 234
Gold Mines of the South..... 37
Gold Mines, Valuation of.....801, 915
"Gold Mines of Western Australia"... 571
Gold Mining, Abyssinia..... 918
*Gold Mining, Alaska..... 76
*Gold Mining in the Alsek District.... 766
"Gold Mining Business, Organization of" 446
Gold Mining Costs at Cripple Creek.. 70
Gold Mining Dividends in New Zealand. 309
Gold Mining Dividends in Transvaal.... 28
Gold Mining Dividends in Western Australia 28
Gold Mining, Egypt.....150, 965
Gold Mining, French Guiana.....117, 458
Gold Mining, Hydraulic, Hoyt's Pat.... 129
*Gold Mining, Korea..... 554
Gold Mining, Lapland..... 285
Gold Mining, Montana, in 1903..... 41
*Gold Mining, New Mexico..... 800
Gold Mining, Nova Scotia..... 89
Gold Mining, Ontario..... 211
"Gold Mining Progress in Kalgoorlie".. 848
Gold Mining, Queensland.....69, 72
Gold Mining, Rhodesia..... 471
Gold Mining, Salvador.....1,048
Gold Mining, Servia.....1,034
Gold Mining, Siam..... 203
*Gold Mining, Silver Peak Region, Nev. 759
Gold Mining, South Australia..... 32
Gold, Native, in Igneous Rocks...440, 511, 596
Gold, Native, in Metamorphic Gneisses. 198
"Gold Occurrence in Great Britain"... 485
*Gold Ore, Grinding, in Korea.....355, 356
*Gold Ore 'Indicator,' Ballarat..... 119
Gold, Placer, Origin of, in California.. 771
Gold Production, Abyssinia..... 6
Gold Production, Argentina..... 6
Gold Production, Austria-Hungary..... 6
Gold Production, Bolivia..... 6
Gold Production, Borneo..... 6
Gold Production, Brazil..... 6
Gold Production, British Guiana..... 6
Gold Production, Central America..... 6
Gold Production, Chile..... 6
Gold Production, China..... 6
Gold Production, Colombia..... 6
Gold Production, Cripple Creek, Colo, in 1903..... 38
Gold Production by Cyanidation in U. S. 33
Gold Production, Dutch East Indies.... 6
Gold Production, Dutch Guiana.....6, 298
Gold Production, Ecuador..... 6
Gold Production, French Guiana..... 6
Gold Production, Germany..... 6
Gold Production, India.....6, 138, 338, 701
Gold Production, Italy..... 6
Gold Production, Korea.....6, 554
Gold Production, Madagascar.....6, 10
Gold Production, Malay Peninsula..... 6
Gold Production, Maryland..... 5
Gold Production, Mozambique..... 6
Gold Production, Newfoundland.....6, 969
Gold Production, New Zealand.....6, 657
Gold Production, Norway..... 6
Gold Production, Peru.....6, 844
Gold Production, Portugal..... 6
Gold Production, Queensland..6, 31, 252, 372, 493, 533, 538, 657, 663, 822, 897, 978
Gold Production, Reporting.....172, 427
Gold Production, Rhodesia, 6, 218, 741, 1,062
Gold Production, Soudan..... 6
Gold Production, Spain..... 6
Gold Production Statistics..... 427
Gold Production, Sweden..... 6
Gold Production, Tasmania..... 978
Gold Production, Transvaal..6, 26, 178, 338, 498, 701, 818, 863, 1,062
Gold Production, Turkey..... 6
Gold Production, Uruguay..... 6
Gold Production, Venezuela..... 6
Gold Production, Victoria...6, 32, 134, 172, 372, 493, 533, 616, 978
Gold Production, West Coast 6
Gold Production, Western Australia..6, 28, 292, 492, 657, 663, 822, 978
Gold Production, Yukon..... 6
Gold Reserves, Secret.....752, 761
Gold on the Saskatchewan..... 127
Gold Saving Dam, De Normandie's Pat. 974
*Gold Saving on Dredges..... 198
Gold Saving, Kidston-Hunter's Pat.... 290
Gold Saving, Sachse's Pat..... 170
Gold Separating and Recovering, Laudahn's Pat..... 974
Gold Separator and Amalgamator, Wismeyer's Pat..... 250
Gold Separator, Korfhage's Pat..... 654
*Gold Separator, La Bud & Barton's Pat. 490
Gold Separator, Schmitz's Pat.....*.. 369
Gold and Silver, Commercial Movement in 1903..... 6
Gold and Silver Exports and Imports Tables ..... Weekly
Gold and Silver Exports, Canada..... 394
Gold and Silver Exports, New Zealand 259, 377, 622, 658, 741
Gold and Silver Exports, Tasmania..... 172
Gold and Silver Mining, Montana, in 1903 41
Gold and Silver Movement, France...7, 586
Gold and Silver Movement, Great Britain 7, 142, 867, 1,027
Gold and Silver Movement, U. S. 4, 7
Gold and Silver Production, Alabama.. 5
Gold and Silver Production, Alaska....5, 75
Gold and Silver Production, Arizona.... 5
Gold and Silver Production, British Columbia 6, 24
Gold and Silver Production, California..5, 37
Gold and Silver Production, Canada 6, 23, 393, 648, 800
Gold and Silver Production, Colorado 5, 434
Gold and Silver Production, Georgia.... 5
Gold and Silver Production, Great Britain 6, 430
Gold and Silver Production, Idaho....5, 13, 81, 1059
Gold and Silver Production, Japan..6, 309
Gold and Silver Production, Leadville, Colo. 86
Gold and Silver Production, Montana.. 5
Gold and Silver Production, Nevada.... 5
Gold and Silver Production, New Mexico 5
Gold and Silver Production, New South Wales 31, 493, 657
Gold and Silver Production, North Carolina 5
Gold and Silver Production, Oregon..... 5
Gold and Silver Production, Russia...6, 108
Gold and Silver Production, South Carolina 5
Gold and Silver Production, South Dakota 5
Gold and Silver Production, Tennessee.. 5
Gold and Silver Production, U. S.....4, 5
Gold and Silver Production, Utah..... 5
Gold and Silver Production, Virginia... 5
Gold and Silver Production, Washington 5
Gold and Silver Production of the World 6
Gold and Silver Production, Wyoming.. 5
Gold and Silver Receipts, Helena Assay Office 815
Gold and Silver, Recent Literature on Geology of.....326, 649, 970
Gold and Silver Recovery from Cyanide Solutions, Christy's Pat..... 614
Gold and Silver Used in the Arts..... 714
"Gold, Solubility in Certain Oxidizing Agents" 890, 963
"Gold in Venezuela"..... 570
Gold Stealing Law in Canada..... 736
Gold Washing Machine, Valk's Pat..... 894
Golden Fleece, Quest of the..... 998
Gordon, David J., "History, Progress and Resources of South Australia".. 610
Gordon's Pat. Preserving Wood..... 290
Goth's Pat. Centrifugal Pump..... 249
Grading and Ditching Machine, Rhodes's Pat. 169
Gramm's Pat. Making Slag Cement..... 653
Granby Mines and Smelter, B. C.....1,006
Granite Production, Canada.....393, 800
Granite Production, Newfoundland..... 969
Grant, U. S., on Wisconsin Lead and Zinc District..... 74
Graphite 168, 1,013
Graphite in the Adirondacks..... 844
Graphite, Ceylon, for U. S..... 280
Graphite Exports, Canada..... 394
Graphite Imports and Exports, U. S., 124, 285, 745, 946
Graphite Production, Canada.....393, 648
Graphite Production, U. S.....4, 5, 124
Graphite Separation, Glogner's Pat.... 854
Graphite Separation, Kendall's Pat.... 330
Grapple, Luke's Pat..... 489
Graupner's Pat. Concentrator..... 734
Grave's Pat. Coal Cutter..... 210
Greaser in Diamond Mining.....954, 996
Great Boulder Proprietary Co., W. A., Sunday Labor at..... 509
Great Britain, Ammonium Sulphate Exports 263
Great Britain, Ammonium Sulphate Production 263
Great Britain, Arsenic Production..... 430
Great Britain, Bank Statement.....Weekly
Great Britain, Bauxite Production..... 430
Great Britain, Blast Furnaces..... 205
Great Britain, Boiler Explosions in..... 365
Great Britain, Borax Imports....502, 1,026
Great Britain, Cement Exports and Imports 141, 502, 1,026
Great Britain, Chalk Production..... 430
Great Britain, Chemical Exports to U. S. 625
Great Britain, Chemical Imports and Exports.....141, 343, 462, 502, 701, 866, 1,026, 1,027
Great Britain, Chemical Trade Conditions 786
Great Britain, Clay Production..... 430
Great Britain, Coal and Coke Exports, 140, 340, 428, 500, 703, 864, 1,024

Great Britain, Coal Consumption of Railways 482
Great Britain, Coal Mine, Large.....1,031
Great Britain, Coal Mines, New..... 234
Great Britain, Coal Mining..... 954
Great Britain, Coal Production.....51, 430
Great Britain, Coinage..... 142
Great Britain, Copper Imports and Exports.....142, 343, 503, 706, 867, 1,027
Great Britain, Copper Production....430, 794
Great Britain, Copper Sulphate Exports, 141, 342, 502, 705, 866, 1,026
Great Britain, Decline of Metallurgical Enterprise in.....196, 511
"Great Britain, Electricity in Mines". 366
Great Britain, Federation of Technical Societies 431
Great Britain, Flint Production..... 430
Great Britain, Fluorspar Production.... 430
Great Britain, Gold and Silver Movement 7, 142, 867, 1,027
Great Britain, Gold and Silver Production 430
Great Britain, Gypsum Production..... 430
Great Britain, Igneous Rocks Production 430
Great Britain, Income Tax on Stock Holdings 468
Great Britain, Iron and Steel Imports and Exports..140, 308, 340, 500, 703, 704, 847, 864, 865, 1,024, 1,025
Great Britain, Iron and Steel Production.....47, 308, 349, 430, 631, 638, 847
Great Britain, Lead Imports and Exports 344, 504, 707, 868, 1,028
Great Britain, Lead Production..... 430
Great Britain, Limestone Production... 430
Great Britain, Manganese Ore Production 430
Great Britain, Metric System in..... 190
Great Britain, Mine Labor in..... 430
Great Britain, Mineral Production..428, 430
Great Britain, Mining Accidents....79, 204
Great Britain, Mining in..... 200
Great Britain, Mining Machinery Exports 523
Great Britain, Nitrate of Soda Imports, 502, 1,026
"Great Britain, Occurrence of Gold in" 485
Great Britain, Ocher Production..... 430
Great Britain, Oil Production..... 430
Great Britain, Oil Shale Production..... 430
Great Britain, Open-Hearth Steel Furnaces in..... 398
Great Britain, Patents—Number Issued 206
Great Britain Patents.....Weekly
Great Britain, Phosphate Imports..141, 502, 1,026
Great Britain, Pyrite Imports....705, 866, 1,026
Great Britain, Pyrite Production..... 430
Great Britain, Quicksilver Imports and Exports.....143, 344, 504, 707, 868, 1,028
"Great Britain, Royal Commission Report on Coal Supplies"..... 729
Great Britain, Salt Exports....141, 502, 1,026
Great Britain, Salt Production..... 430
Great Britain, Saltpeter Imports and Exports 141, 502
Great Britain, Sand Production..... 430
Great Britain, Sandstone Production... 430
Great Britain, Slate Production..... 430
Great Britain, Sulphate of Ammonia Exports 102
Great Britain, Sulphur Imports..342, 502, 1,028
Great Britain, Sulphuric Acid Exports 342
Great Britain, Tin Imports and Exports, 143, 344, 503, 707, 867, 1,028
Great Britain, Tin Production.....18, 430
Great Britain, Tungsten Production.... 430
Great Britain, Uranium Ore Production. 430
Great Britain, Zinc Imports and Exports, 143, 344, 504, 707, 868, 1,028
Great Britain, Zinc Production.....308, 430
Great Fingall Con. Mg. Co., Report.... 657
*Greene Con. Copper Co., Ore Dressing Plant 1,044
*Greene Con. Copper Co., Mex., View of Working 22, 23
"Greenland, Rocks" 126
Green & Martin's Pat. Consolidating Peat 329
Green, Morris M., Rotary Internal Screw Conveyors 836
Green's Pat. Acetylene Gas Generator.. 974
Greenstone, Native Copper in..... 276
Greenwaldt's Pat. Ore Treatment..... 933
Gresley's Pat. Cement..... 129
Grey's Pat. Manufacturing Flanged Metal Bars..... 734
Griffin's Pat. Producing Chemical Compounds 653
*Griffith, Wm., Missouri Coal-Field.... 564
*Grime, W. Wallace, Atlin District, B. C..... 523
Grimm's Pat. Match Composition..... 573
Grimsley, G. P., "Kansas Oil, Gas and Glass Industries"..... 126
Grinding Machines.....387, 403, 512, 635
Grinding Mill, Breakall's Pat..... 410
Grinding Mill, Cox's Pat..... 974
Grinding Mill, Deards, Copenhaver & Adelsperger's Pat..... 654
Grinding Mill, Robinson's Pat.....210, 249
Grinding Mill, Sturtevant's Pat..... 934
Grindstone Production, Canada..... 393
Griswold, F. M., on Storage of Bituminous Coal 725
Grondal's Pat. Furnace..... 410
Grondal's Pat. Iron Ore Briquettes... 330
Grove's Pat. Separating Metal Sheets.. 693
Grobb's Pat. Geodetical Instrument.... 369
"Guanajuato Census"..... 650
*Guanajuato Mining District, Mex..599, 642
Guano Exports, Damaraland..... 381
Guano Exports, Peru 381
Guhrs's Pat. Alloy for Galvanizing... 854
Gunpowder Exports, U. S....381, 542, 745
Gunpowder, Robinette's Pat..... 934
Gunther, E., Electrolytic Separation of Nickel and Copper..... 363
Gustavsen's Pat. Machine for Rolling Conveyors 893
Guttmann, Oscar, Recent Improvements in the Manufacture of Sulphuric Acid 1,007
Gypsum 954, 1,013
Gypsum, Gold in..... 956
"Gypsum Industry, New York"..... 610
"Gypsum, Larimer Co., Colo."..... 610
Gypsum, New Mexico.....1,034
Gypsum, New Use for..... 956
*Gypsum Plaster Industry of Kansas.. 442
Gypsum Production, Canada.....393, 648
Gypsum Production, Great Britain..... 430
"Gypsum and Salt Deposits of Southwestern Virginia"..... 406
*Gysinge Electric Steel Furnace, Sweden 967

H

Haanel, Dr., on Electric Smelting of Iron Ore 846
Haanel, Eugene, "Location and Examination of Magnetic Ore Deposits by Magneto-metric Measurements" ..126, 207
Haar's Pat. Well Drilling Machine..... 974
Hack, E. Barton, "Progress of Gold Mining in Kalgoorlie, W. A."..... 848
Hack's Pat. Filter Press..... 129
*Hadfield, Robert A..... 794
*Hadfield, R. A., Bessemer Medal..... 794
Hadfield, R. A., "Iron and Tungsten Alloys" 485
Hadfield's Pat. Hardening Steel..... 450
Hadfield's Pat. Iron Alloy for Electric Purposes 1,054
Hadfield's Pat. Making Manganese Steel 370
Hadley's Pat. Miner's Lamp..... 654
Hafna Zinc Mine, North Wales, New Process 362
Hager's Pat. Electrode 129
Hague's Pat. Retort 853
Haldane, J. S., Prevention of Miner's Phthisis 994
Hall, J. W., "Mechanical Treatment of Steel" 446
Halloysite 773
Hall's Pat. Amalgamator 200
Halsey, Frederick A., "Metric Fallacy" 166
*Hamfeldt's Pat. Blast Furnace..... 853
Hamill's Pat. Pit Car..... 854
Hamilton Steel & Iron Co., Ont..... 23
Hammon, Henry G., on Use of Rubble Concrete for Thin Walls..... 558
Hanchett, Geo. T., "Alternating Currents" 366
*Hancock Jig 806
Handy's Pat. Hoisting Machine..... 974
Hannes's Pat. Ore Treatment..... 734
Hansen's Pat. Dump Coke Car..... 330
Hansen's Pat. Lining for Roasters..... 694
Hansen's Pat. Triple-Hopper Coke Car. 409
Harbord, F. W., "Metallurgy of Steel" 446, 571
Hardinge, Hal., Miner's Phthisis..... 915
*Hardsocg's Pat. Miner's Pick..... 814
*Harmet's Pat. Electrometallurgy of Iron and Steel 209
Harpen Coal Co., Cost of Mining Coal.. 804
Harris, G. D., "Oil in Louisiana"..... 930
Harris' Pat. Air Lift for Fluids..734, 774, 814
Harrison's Pat. Dump Car..... 733
Hart, Edward, Technical Education.... 916
Hartman's Pat. Gas Retort..... 90
Hart & Meissner's Pat. Dump Car..... 973
Hartshorn's Pat. Pick..... 774
Hart's Pat. Conveyor 853
*Harvard Laboratory for Metallurgical Chemistry 918
Harvard University, New Departure in Mining Education 230
Harwick Mine Explosion.....149, 632
Hasanbach's Pat. Producing Sulphuric Anhydride 329
Haskins' Pat. Heating-Boiler..... 934
Hatch, Frederick H., "Boulder Beds of Ventersdorp, Transvaal" 446
Haulage, Electric, for Mines.....324, 558
Haulage, Rope, Rollers..... 638
Haulage Ropes, Greasing, Macadam's Pat. 1,013
Haulage Ropes, Resistance of..... 638
Haulage Ropes, Speed of..... 764
Haworth, Erasmus, "Mineral Resources of Kansas" 246
"Hayden, King, Powell and Wheeler Surveys, Catalogue and Index of".... 650
Hayes, C. W., "Contributions to Economic Geology" 729, 770
Hayes, C. W., "Manganese Ores of the Cartersville District, Ga."..... 809
Hayward's Pat. Bucket Suspension Device 90
*Head-Frame, Simple 483
Heater for Oil-Wells, Butler's Pat.... 854
Heating-Boiler, Haskins' Pat..... 934
Hebb's Pat. Coke Drawing Machine.... 129
Heenan's Pat. Engine for Mining Machines 734
Heintz's Pat. Conveyor..... 369
Heinz & Hegeler's Pat. Making Sulphuric Acid 369
Helena Assay Office Gold and Silver Receipts 815
Helm's Pat. Brick Machine 973
*Helm's Pat. Ore Treatment..... 574
Hemingway's Pat. Treating Waste Acid 210
Hendryx Cyanide Process....451, 723, 955
Henrard's Pat. Mine Cage Safety Stop. 894
*Henry Colliery, W. Va..... 277
*Henry, R. A., Hydraulic Apparatus to Prevent Overwinding 518
Herbert & Kirkup's Pat. Spray Pump.. 574
Heredity in Mining..... 551
Heting, Carl, "Ready Reference Tables" 848
Herndon's Pat. Prospector's Pan..... 894
Herrenschmidt's Pat. Making Vanadium Alloys 210
Herrenschmidt Process for Smelting Antimony 161
Herreshoff, J. B. F., Improvement in McDougall Furnace 274
Herreshoff, J. B. F., Training of Technical Chemists 634
Hetzel's Pat. Bucket Elevator..... 250
Hewitt's Pat. Mine Cage Pump..... 574
*Heywood, William A., Copper Losses in Blast Furnace Slags 295
Heywood, William A., Pyrite Smelting. 231
Hibbing, Minn., Water Supply..... 550
Hicks' Pat. Ore Concentrator..... 209
Higgins' Pat. Head for Marble Polishing Machines 853
Hille, F., Baraboo Iron Ore..... 875
Hillmer's Pat. Bore-Hole Plummet..... 410
*Hill, Robert T., Guanajuato Mining District 599, 642
Hills, Charles H., on Power Transmission Chains 641
Hills & Lane's Pat. Making Hydrogen.. 854
Hinge for Mine-Doors, Jeffrey's Pat... 130
Hinz's Pat. Manufacturing Peroxides.. 853
Hiorns, Arthur J., on Alloys of Copper and Arsenic 714
Hirsh's Pat. Retort 974
Hixon, Hiram W., Pyrite Smelting.... 906
Hobart, Frederick, Iron and Steel in 1903 46
Hodge & Bartle's Pat. Rock Drill Chuck 370
Hodgson, R. B., on Styrian Steel..... 927
Hoelsche's Pat. Stamping Machine for Plaster Clay 449
Hoen, A. B., on Iowa Lithographic Stone 565
Hoerder Bergwerks & Huetten Verein's Pat. Melting Metals 410
Hoffman, Frederick L., Fatal Accidents in Metal Mining in U. S.....79, 119
Hoffman's Pat. Binder for Briquettes.. 813
Hoffman's Pat. Building Block..... 409
Hoffman's Pat. Washing Granular Materials 1,013
Hoist and Conveyor, Wedge's Pat..... 854
Hoist and Conveyor, Delaney's Pat..... 330
Hoist and Conveyor, Johnson's Pat..... 129
Hoist and Conveyor, Long's Pat..... 573
Hoist, Electric Mining in Germany..... 886
*Hoist, Electric Mining, Lidgerwood... 365
Hoist, Handy's Pat..... 974
Hoist, Safety Device for, Lewis's Pat. 129
Hoist, Stratton's Pat..... 774
Hoist, Wellman & Moore's Pat.....1,014
Hoisting and Dumping Apparatus, Weber's Pat. 90
Hoisting, Electricity or Steam for..... 881
Hoisting Engine Drum, Miller's Pat.... 933
*Hoisting Engine, Large Vulcan..... 567
Hoisting Engine Safety Device, Coulson's Pat. 210
*Hoisting Engine, Siemens-Ilgner Electric 1,046
Hoisting Engines, Electric 1,033
Hoisting Equipment, Bollman's Pat.... 653
Holland Bank Statement.....Weekly
Holland, Coal Mining..... 190
*Holland Co. Dake Motor..... 689
Hollister, A. M., Corinth Feldspar Mine, N. Y..... 208
Hollister, C. H., "How to Hold and Locate a Mining Claim".....1,058
Hollister's Pat. Artificial Fuel.....1,014
Holmen's Pat. Loading and Unloading Machine 1,054
Holmes, Joseph A., "Mica Production in 1902" 485
Holmes' Pat. Gate and Chute for Coal Pockets 330
Holmes' Pat. Tunnel Construction..... 250
"Honduras Gold and Silver Mines"..... 890
Hoover, H. C., Economic Ratio of Treatment Capacity to Ore Reserves.. 475
Hoover, H. C., Treatment of Sulpho-Telluride Ores 111
Hoover, H. C., Valuation of Gold Mines 801
Hoover & Mason's Pat. Excavating and Sluicing Gravel 774
Hoover & Mason's Pat. Gate for Ore Pockets 370
Hopkins, T. C., "Cambro-Silurian Limonite Ores of Pennsylvania"..... 485
*Hopkins' Pat. Obtaining Zinc..... 450
Hopkins' Pat. Separator..... 290
Horn Silver Mining Co., Utah Report... 612
Horry & Price's Pat. Electric Furnace. 694
Horry's Pat. Producing Carbide..... 694
Horstman, Henry C., "Twentieth Century Handbook for Engineers and Electricians" 650
Horton's Pat. Brick Machine..... 329
Hoskold, C. A. L., "Deposits of Hydroborate of Lime" 406
Hospital Hill Shales, Transvaal..... 549
Hotchkiss, W. E., Marvin Electric Drill 891
"Houston's Copper Manual" 166, 650
Hout's Pat. Welding Flux..... 813
Hovey, E. O., Geological Society of America Meeting 73
Howard's Pat. Artificial Fuel..... 250
Howe, Henry Marion, "Iron, Steel and Other Alloys" 207
*Howe Sound, B. C., Cliff of Ore on... 25
Howells' Pat. Safety Catch for Mine Cages 330
Howley, James P., "Report on Mineral Resources of Newfoundland" 848
Hort's Pat. Hydraulic Gold Mining.... 129
Huber's Pat. Rolling Mill Feed Table.. 290
Huffelmann's Pat. Making Briquettes.. 128
Hughes' Pat. Pulverizer..... 653
Hull, Blyth & Co. on Welsh Coal Market ..... Weekly
Hulton Colliery Co.'s Pat. Hydraulic Press Piston 410
Hunt, Bertram, Cyanidation in Costa Rica 635
Hunter's Pat. Stone Sawing Machine.. 409
Hunt's Pat. Electrolytic Production of Hydroxides and Oxides of Metals.... 128
Hunt's Pat. Handling Coke..... 369
Hunt's Pat. Ingot Perfecting Machine.. 530
*Hutchinson, W. Spencer, Cost of Mining Zinc Ore in Joplin District..... 312
Hutchinson, W. S., Future of Joplin.... 835
Hutton Iron Range, Ont..... 401
Hybinettea's Pat. Copper Ore Treatment 290
*Hydraulic Apparatus to Prevent Overwinding 518
Hydraulic Engine, Pagett's Pat..... 329
Hydraulic Elevator on Glacier Creek... 77
Hydraulic Mining 408
Hydraulic Mining in California..92, 251, 308, 415, 451, 467, 508, 548, 1,055
Hydraulic Mining Regulations for the Yukon 371
Hydraulic Nozzle, Yeatman's Pat..... 130
Hydraulic Press, Fisher's Pat..... 290
Hydraulic Press Piston, Hulton Colliery Co.'s Pat. 410
Hydraulic Press, Tonge's Pat..... 614
Hydrocarbon Furnace, Gibbs' Pat..... 974
Hydrocarbon Gas Generator and Burner, Agramonte's Pat. 974
Hydrofluoric Acid, Doremus' Pat..... 529
Hydrogen, Making, Hills & Lane's Pat. 854
Hydroxides and Oxides of Metals, Electrolytic Production of, Hunt's Pat... 128

I

Iceland, Calcspar..... 954
Idaho, Coeur d'Alene District in 1903.. 13
*Idaho, Coeur d'Alene Notes..... 923
Idaho, Copper Production..... 81
Idaho, Cyanide Process in..... 34
Idaho, Extra-Lateral Rights Decision in 912, 936
Idaho, Gold and Silver Production..5, 13 81, 1,059
Idaho, Lead Production.....13, 81
Idaho, Metal Production in 1903..... 81
"Idaho Mines Report"..... 446
Idaho, New Building Brick Industry... 735
*Idaho, New Gold Mining Dredge in.. 925
Idaho, Opal Discovery..... 491
"Idaho-Oregon Geologic Atlas"..... 848
Idaho, Pearl District.....1,042
Idaho, River Pollution by Mines..... 371
*Idaho, Silver City District..... 885
Idaho, "Wild-Cat" Mining in..... 228
*Ilgner-Siemens System for Electric Mine Hoists.....1,046
Illemann's Pat. Fire-proof Building Block 410
Illinois, Coal Miners' Wages..... 580
Illinois Coal Mining in 1903..... 52
Indiana, Coal Mining Accidents..... 336
Illinois, Coal Production..... 52
"Illinois Labor Statistics"..... 848
"Illinois, Lead and Zinc Deposits"....1,011
Illinois, Zinc Production..... 16
Ilmenite 389
Imlay's Pat. Magnetic Ore Separator.... 773
Income Tax in Great Britain..... 468
Incorporation Laws..... 593
Indexing Current Information..89, 247, 288
India, Geological Survey..... 10
*India, Geology of Kolar Gold-Field.. 238
India, Kolar Gold-Field..... 268
India, Gold Production.....6, 138, 338, 701
India, Silver Imports..... 325
Indiana, Clay.....1,021
Indiana, Coal Discovery, New..... 496
Indiana, Coal Miners' Wages..536, 700, 1,021
Indiana, Coal Mining Accidents..... 336
Indiana Coal Mining in 1903..... 53
Indiana, Coal Production.....52, 53
"Indiana Folio, Pa."..... 650
"Indiana-Illinois, Patoko Folio"..... 890
Indiana, Zinc Production..... 16
Indian Exchange ..... Weekly
Indian Territory, Asphalt Lands in.... 246
Indian Territory, Coal Production..... 52
"Indian Territory, Mine Inspector's Report" 287
"Indian Territory, Tishomingo Folio" 126, 366
*Indicator Vein, Ballarat..... 119
Indo-China, Coal in..... 681
Indo-China, Iron Making in..... 878
Indo-China, Metal Mining in..... 757
Industrial Stock Quotations: New York; Philadelphia; Pittsburg..... Weekly
Ingalls, W. R., Economic Ratio of Treatment Capacity to Ore Reserves 715
Ingalls, W. R., Joplin District..... 154
Ingalls, W. R., Lead in 1903..... 11
Ingalls, W. R., Leadville Zinc Ore Production 196
Ingalls, W. R., Mechanical Conveyors. 640, 681
Ingalls, W. R., Zinc in 1903..... 15
Ingot Crane, Taylor's Pat..... 490
Ingot, Davis' Pat. 249
Ingot Handling Machine, Foy's Pat.... 129
Ingot, Lash's Pat..... 130
Ingot Mold, Leibman's Pat..... 654
Ingot Perfecting Machine, Hunt's Pat. 530
Ingot Tongs, Sites' Pat 89
Inguaran Mines, Mex.....532, 856
Institution of Mining and Metallurgy Award 67
Insulating Wires, Martin's Pat.....1,014
International Engineering Congress..... 724
International Nickel Co., Report..... 932
"Interstate Commerce Commission, Accident Bulletin"..... 366
"Interstate Commerce Commission Report" 930
Interstate Commerce Commission and the Anthracite Railroads....549, 782, 863
"Investors' Handbook"..... 689
Iodine Production, Chile.....1,026
Iowa, Coal Mining in 1903..... 53
Iowa, Coal Production.....52, 53

Iowa Engineering Society, "Proceedings" 526, 970
Iowa Lithographic Stone..... 565
Iridio-Platinum Anodes for the Electrolysis of Alkaline Solutions.....1,037
Iridium 463
Iron in 1904..... 2
Iron Alloy for Electric Purposes, Hadfield's Pat.....1,054
Iron Alloys, Electrolytic Manufacture of, Gin's Pat. 449
Iron in Australia..... 881
Iron, Cementation of, Lecarne's Pat.... 90
Iron Consolidation in the South, Proposed.....220, 267, 300, 704, 898
Iron, Construction of Contract for Delivery of.....1,053
Iron Consumption in Germany..... 728
Iron Consumption, U. S..... 189
Iron and Copper Tubes, Duty on..... 128
Iron, Corrugated Sheet..... 199
Iron, Crude, Converting into Malleable Iron or Steel, Deemer's Pat..... 654
Iron, Electric Refining, Société Electro-Metallurgique Francaise's Pat..... 330
Iron, Electrolytic..... 846
Iron Founding, Cochran's Pat..... 129
"Iron Industry"..... 326
Iron Making in Indio-China..... 878
Iron Miners' Wages in Lake Superior Region.....87, 257, 941
Iron Mining, Ontario.....133, 775
Iron Mining, South Russia.....1,010
*Iron Mixer, Kennedy..... 808
Iron Ore Aerial Tramway in Spain... 678
Iron Ore Association, Dissolution..... 752
Iron Ore Briquettes, Grondal's Pat... 330
Iron Ore Briquettes, Rouse & Cohn's Pat. 1,054
Iron Ore Briquettes, Schulte-Steinberg's Pat. 734
*Iron Ore, Brown Hematite, Preparation of 962, 997
Iron Ore Carrier, Large.....686, 975
*Iron Ore, Concentration of Mesabi..... 960
Iron Ore Consumption, U. S..... 46
"Iron Ore, Cranberry District, N. C.—Tenn." 286
Iron Ore Deposit, Enormous..... 121
Iron Ore Deposits, Baraboo, Wis..... 875
Iron Ore Deposits, Russia..... 994
Iron Ore Deposits of Varanger, Norway. 553
Iron Ore, Economic Geology of..... 286
Iron Ore, Electric Smelting...187, 656, 846
Iron Ore Exports, Canada.....46, 393, 395
Iron Ore Exports, Spain.....161, 687, 840
Iron Ore Exports, Sweden..... 242
"Iron Ore, Hartville District, Wyo."... 485
Iron Ore, Hematite, Geological History in New York..... 286
Iron Ore, Lake Freights on.....1,031, 1,064
Iron Ore of Lake Superior, Original Source of..... 286
*Iron Ore Mine, Mahoning, Minn..... 50
Iron Ore Movement, Lake Superior..... 804
Iron Ore and Ocher, Recent Literature on Geology of.....485, 688
Iron Ore Prices.....307, 752, 785
Iron Ore Production in 1902 in U. S... 354
Iron Ore Production, Great Britain.... 430
Iron Ore Production, Michigan..... 205
Iron Ore Production, Minnesota..... 205
Iron Ore Production, Ontario.....23, 648
Iron Ore Production, Quebec..... 800
Iron Ore Production, U. S.....4, 5, 46
Iron Ore, Russia..... 518
Iron Ore Shipments, Lake, 46, 67, 84, 123, 176, 205, 325, 804, 1,055
Iron Ore Shipments, Michipicoton, Canada 84
Iron Ore, Thermo-Electric Smelting of 132
"Iron Ore in the Uinta Mountains, Utah" 688
"Iron Ore of Washington"..... 286
Iron Oxide Making, Parker's Pat..... 974
Iron, Pig, Effect of Gaseous Contents on 609
Iron, Pig, Imports, San Francisco, Cal. 100
Iron, Pig, Production by Grades..... 445
Iron Pig, Production in Pittsburg District 986
Iron, Pig, Production, Quebec..... 800
Iron, Pig, Warrants, Speculation in America 539
Iron Pigments, Making, Campbell's Pat. 170
*Iron, Producing Direct from Ore, Brown & Reynolds's Pat..... 813
Iron Prices in the South..... 261
"Iron Production".....1,050
Iron Production, Alabama..... 48
Iron Production, Canada.....279, 393
Iron Production, Newfoundland..... 969
Iron Production, Scotland..... 164
Iron Production of the World..... 349
Iron, Purifying, Simpson's Pat..... 210
Iron Pyrite, Separating from Zinc Blende, Danziger's Pat..... 489
Iron Ranges of Ontario, Exploration of 401
Iron Region, Lake Superior..... 84
Iron Sand, Converting into Briquettes, Rouse's Pat..... 774
Iron Sand, Magnetic, in Java.....1,049
Iron, Sheet, Making, Clasper's Pat.... 614
Iron and Steel in 1903..... 46
Iron and Steel Buildings..... 80
Iron and Steel, Cleansing, Weber's Pat. 450
Iron and Steel Columns Filled with Concrete 917
Iron and Steel Duties, Mexico..... 307
Iron and Steel Imports and Exports, Germany 379, 728, 865
Iron and Steel Imports and Exports, Great Britain..140, 308, 340, 500, 703, 704, 847, 864, 865, 1,024, 1,025
Iron and Steel Imports and Exports, U. S.....4, 46, 47, 219, 379, 541, 743, 902
Iron and Steel Markets: Birmingham, Ala.; Chicago; Cleveland; New York; Philadelphia; Pittsburg; Cartagena, Spain ..... Weekly
"Iron and Steel Metallurgy Hand-Book" 570
Iron and Steel Production, Belgium, 241, 365
Iron and Steel Production, France.... 569
Iron and Steel Production, Germany, 187, 269, 349, 434, 557, 644, 649, 728, 766
Iron and Steel Production, Great Britain, 47, 308, 349, 631, 638, 847
Iron and Steel Production, Ontario.... 648
Iron and Steel Production, Spain..... 598
Iron and Steel Production, Sweden.... 798
Iron and Steel Production, U. S..4, 46, 189, 204, 268, 349, 421, 591, 598, 665, 786, 824
Iron and Steel, Samples from Electric Smelting 776
Iron and Steel Shipments from the South, ...140, 824, 1,025
Iron and Steel Structural Work, Cost of Drafting for..... 82
Iron and Steel Tariff in Canada..... 133
Iron and Steel Treatment, Engels's Pat. 329
Iron and Steel, Welding, Allen's Pat.... 894
"Iron, Steel and Other Alloys"..... 207
Iron Trade, Conditions in..... 388
Iron Trade, Germany..... 228
Iron Trade, Great Britain.....308, 847
"Iron and Tungsten Alloys"..... 485
Iron Work, Protecting Material, Emery's Pat. 89
Iron Workers' Wages, Pittsburg, Pa.. 101
"Irrigation Engineering"..... 287
Irrigation Law and Mining in California 211
"Irrigation Works, Ancient, on the Tigris, Restoration of"..... 446
Irvine's Pat. Sand Pump..... 170
Isle Royale Copper Co., Mich., Report 811
Italian Electro-Chemical Co., Italy.... 81
Italy, Asphalt Deposits of San Valentine 607
Italy, Bank Statement.....Weekly
Italy, Copper Production..... 794
Italy, Gold Production..... 6
Italy, Quicksilver Production.....246, 361
Italy, Utilization of Water Power in.. 81
Italy, Zinc Production..... 308
Ivanhoe Mine, W. A., Report..... 736

J

Jackson & Adkins' Pat. Excavator..... 934
Jackson, Town & Lloyd's Pat. Metallic Tube Machinery 370
Jackson's Pat. Tunnel Bar..... 250
*Jacobs, E., British Columbia—Snowshoe Consolidation 162
Jacobs, E., St. Eugene Mine, B. C.... 966
Jacobs, E., Zinc Ores in British Columbia 844
Jacobs' Pat. Coating Compound..... 773
Jacobsen's Pat. Copper-Aluminum Alloys 1,014
Jade, Duty on 409
Jadeite 722
Jahraus's Pat. Concentrator..... 210
*Jahraus's Pat. Separator 210
Jalhay, Henry, "Honduras Gold and Silver Mines" 890
James, Alfred, Improvements in Cyanidation 161
*James, Alfred, Metallurgical Progress in Western Australia 30
James' Pat. Conveyor..... 773
James' Pat. Making Castings..... 773
James' Pat. White Lead Manufacture.. 210
Jamieson & Odling's Pat. Separating Zinc Blende from Ores..... 170
Jamieson, S. A., Suggestion for Design of Ore-Bins and Coal-Pockets..... 728
Japan, Antimony Industry 674
Japan, Coal Production 309, 399
Japan, Copper Production..8, 103, 309, 794
Japan, Electric Power in..... 558
Japanese Labor in Mexico.....1,056
Japan, Gold and Silver Production...6, 309
"Japan, Population of" 366
Japan, Silver Imports 325
"Japan, Statistical Abstract" 729
Japan Sulphur for Pacific Coast..... 262
Japan, Sulphur Production 309
Jaques' Pat. Artificial Stone..... 128
Jarrett's Pat. Conveyor 290
Jas' Pat. Purifying Gas..... 490
Java, Magnetic Iron Sand in.....1,049
*Jeffrey Mfg. Co. New Gold Mining Dredge 925
Jeffrey's Pat. Combination Die for Forging Machines 654
Jeffrey's Pat. Hinge for Mine-Doors.... 130
Jeffrey's Pat. Mining Machine..... 290
*Jehol Region, China, Mining Regulations for 433
Jenkins, H. C., Laboratories for Advanced Instruction 470
Jenkins' Pat. Briquette Machine.....1,053
Jennings, J. T., Henry Colliery..... 277
*Jerusalem Placer, Russia 762
Jessup's Pat. Separator 1,013
Jet 804
*Jig, Hancock 806
Job, Robert, on Causes of Durability of Paints for Structural Work.....1,057
*Johannesburg Mine, Dinner Hour at.. 35
Johannesburg School of Mines..... 388
*John, Irvin, Note on Smelter Stacks... 203
Johnson, J. E., Jr., Cyanidation of Sands 392
Johnson, J. E., Jr., Preparation of Brown Hematite Iron Ores 997
Johnson vs. Sutter County, Cal..... 508
Johnson's Pat. Hoist and Conveyor.... 129
Johnson's Pat. Mechanical Rabble for Ore Roasting Furnaces 170
Johnson's Pat. Reclaiming Flue Dust.. 250
Johnson's Pat. Rolls for Making Sheet-Metal Strips 130
Johnson's Pat. Salt Raker.....1,053
Johnson, W. McA., Reduction Temperature of Zinc Oxide 1,045
Johnston, Philip D., "Manual of Mechanical Drawing" 88, 486
Johnston, W. J. 107
Johnston's Pat. Metal Coating..... 813
*Jones, C. H., Copper Extraction at Rio Tinto 644
Jones, J. A., "Mining Laws of Spain"..1,050
Jones & Davies' Pat. Coal Cutter..... 530
Jones & Laughlin Steel Co. and Blast-Furnace Flue-Dust Litigation..508, 548, 573
Jones & Laughlin Steel Co., New Eliza Furnace 911
*Jones & Laughlin Steel Co. Vesta No. 4 Colliery 1,039
Jones' Pat. Coke Puller 654
Jones' Pat. Puddling Furnace..... 614
Jones' Pat. Safety Brake for Hoisting Engines 130
Joplin District in 1903..... 17
Joplin, Future of 792, 835
*Joplin, Slime Treatment in..... 683
*Joplin Zinc Ore, Cost of Producing..81, 111, 154, 312
Joplin Zinc Ore Production and Spelter Prices 672
Jory's Pat. Electrolytic Deposition..... 693
Jory's Pat. Recovering Metals from Ores or Sands 893
Joseph's Pat. Extracting Metals by Chemical Process 734
Judson, John N., Diamond Concentration 996
Julian, H. Forbes, "Cyaniding Gold and Silver Ores" 771
Junction Development Co., Diamond Drilling in Arizona 888
Juneau, Alaska 75
"Juneau Gold Belt, Alaska" 970
Juptner, Hanns Freiherr von, "Grundzuge der Siderologie" 890

K

*Kaffir Mine-Workers..... 281
Kaiser's Pat. Zinc Ore Treatment..... 614
*Kalgoorlie Chamber of Mines..... 1,048
Kalgoorlie Gold Deposits..... 326
*Kalgoorlie Gold-Field, W. A., First Zinc-Box in..... 31
Kalgoorlie, Mining in 1903..... 108
"Kalgoorlie, Progress of Gold Mining in" 848
*Kallentes, Nev..... 116
Kalle & Co.'s Pat. Bismuth Compound.. 894
Kampmann's Pat. Reinforced Concrete Construction 1,013
*Kanawha Coal Region Relief Map.... 559
Kansas, Cement Manufacture in..... 810
Kansas, Coal Production..... 52
*Kansas, Gypsum Plaster Industry..... 442
"Kansas Mineral Resources"..... 246
"Kansas, Oil, Gas and Glass Industries" 126
Kansas Portland Cement Co., Kan., Plant 810
Kansas, Zinc Production..... 16
Kaolin and Fire-Clay as Minerals..... 773
Kaolin Imports, New York..... 221
Kate Hayes Sluice Mining Decision, Cal. 92, 367, 548, 575, 613
Keating's Pat. Conveyor System..... 574
Keep-it-dark Gold Mg. Co., N. Z..309, 992
Keffer, on Mining in the Boundary District, B. C..... 400
Keith, A., "Iron Ore Deposits of the Cranberry District, N. C.—Tenn"..... 286
Keith, Arthur, "Recent Zinc Mining in East Tennessee"..... 770
Kelland & Morrison's Pat. Peat Block for Fuel..... 573
Keller's Pat. Electric Furnace....489, 854
Kelly's Pat. Tappet for Stamp Mills.. 369
Kemp, J. F., Ores from Igneous Magmas 675
Kendall's Pat. Making Cyanides..... 894
Kendall's Pat. Separating Graphite.... 330
*Kennedy Iron Mixer..... 808
Kennedy's Pat. Hot Blast Valve..... 894
*Kenner's Pat. Coal Separator..... 210
Kent, Theodore—Fraud..... 971
Kentucky, Coal Production..... 52
Kentucky, Cobalt and Nickel in..... 208
Kentucky Geological Survey.....412, 486
"Kentucky, Lead, Zinc and Fluorspar Deposits" 366
Kentucky, Norton Coals of the Big Sandy Basin 255
Keogh & Broughton's Pat. Purifying Alumina 450
Keogh & Broughton's Pat. Treating Aluminum Sulphate..... 654
Kepp's Pat. Metallurgical Furnace..... 410
"Kern County, Cal., Register of Mines and Minerals of" 809, 890
"Kerosene Shale Deposits of New South Wales" 88, 486
Kershgen's Pat. Discharging Coke from Ovens 370
Ketchikan District, Alaska..... 76
*Keuffel & Esser Co., Electrical Blue-Printing Machine..... 485
"Keystone Coal-Field Directory"..... 126
Kibler's Pat. Calcining Apparatus..... 973
Kidston-Hunter's Pat. Gold Saving.... 290
Kieselguhr 714
*Kilgore Steam Shovel..... 205
Killian's Pat. Loader..... 973
Kiln, Nickerson's Pat..... 893
Kiln, Pickett's Pat..... 410
Kiln, Schweizer's Pat..... 249
Kiln, Sutton's Pat..... 894
Kiln, Warwick's Pat..... 130
Kimball, Gordon, Discovery of Carnotite 956
Kimball's Pat. Drill-Holder.....934, 956
Kimball's Pat. Pump Attachment..... 169
*Kimber's Pat. Rock Drill Chuck..... 614
King, Barnhart & King's Pat. Steam Shovel 893, 1,053
"King, Clarence, Memoirs and the Helmet of Mambrino"..... 848
King's Pat. Bumping Screen..... 974
King's Pat. Dump-Car..... 694
Kinsell's Pat. Concrete Mixer..... 490
Kirby, E. B. on Rossland Ore Deposits 400
*Kirk, M. P., New Quicksilver Mining District 685
*Kjellin, F. A., Electric Steel Furnace at Gysinge, Sweden..... 967
Kleinfontein Mine Shaft, Transvaal.... 994
*Klein's Pat. Concentrator and Amalgamator 854
Klepetko, Frank, Improvements in McDougall Furnace..... 274
*Klepetko Water-Jacket..... 796
Klockmann, F., Formation of Certain Ore Deposits..... 964
Kloman's Pat. Gas and Coke Retort 489, 693
Kloman's Pat. Leak-Detector..... 813
*Kluane Lake, Alsek District..... 767
Knecht's Pat. Adjusting Mechanism for Rolls 249
Kneppel's Pat. Alloy..... 813
Knox's Pat. Feeding Gas Producers..1,053
*Knudsen, E., Pyrite Smelting in Norway 757
Knupp's Pat. Well Derrick..... 249
Koch, Walter F., Pyrite Smelting, 796, 1,035
Koeniger's Pat. Ore Bricks..... 530
Kohler, G., "Lehrbuch der Bergbaukunde" 610
*Kolar Gold-Field, Geology of.....238, 268
Koller's Pat. Purifying Steel..... 250
Koneman's Pat. Briquetting Machine 330
Koneman's Pat. Manufacturing Gas.... 129
*Koontz's Pat. Coal Drilling Machine.. 574
*Koppel, Arthur, Quarry Railroad..... 808
*Koppers' Pat. Coke Oven..... 370
Korea, Gold Exports..... 355
*Korea, Gold Mining.....348, 355, 554, 712
Korea, Gold Production.....6, 554
*Korean Drilling Match..... 357
*Korean Superstition in Mining.....1,005
Korfhage's Pat. Gold Separator..... 654
Kowalski & Moscicki's Pat., Electrical Production of Nitrogen..... 450
Koyl's Pat. Coal Separator..... 529
Krahmann, Max, "Economic Geology" 207, 486
Krahn, E., Method of Determining Tungsten in Steel..... 362
*Kraus' Pat. Power Hammer and Rock Drill 169
*Krause Atmospheric Stamp..... 769
Krause's Pat. Making Diamond Draw Plates 250
Krause's Pat. Setting Diamonds for Industrial Purposes..... 654
Krennerite 394
Krieckhaus, Leon L., Use of Metallic Currency 691
Krogh's Pat. Pump..... 449
Kruger's Pat. Fire-proof Material.... 249
Krusch, P., Gold Deposits of Kalgoorlie 326
Kryszat's Pat. Valve..... 733
Kummel, Henry B., "Report New Jersey State Geologist".....1,050
Kumpfer & Hoppe's Pat. Coal Cutter.. 90
Kunze & Danziger's Pat. Roasting Blende 250
Kurzwernhart's Pat. Avoiding Loss of Heat in Furnaces..... 894
Kuzel's Pat. Rock Drill..... 370

L

Labor Conditions in Colorado. (See under Colorado.)
Labor Conditions in the Southwest..... 510
Labor in Lake Iron Mines.....136, 176
Labor Law in British Columbia..... 656
Labor Lien on Mine May be Enforced by Laborer 1,053
Labor, Sunday, in Western Australia... 509
Labor in the Transvaal..26, 27, 94, 133, 252
Labor Troubles, Remedy for 350
Laboratories for Advanced Instruction 467, 470, 547, 551, 555, 595, 676
*Laboratory for Metallurgical Chemistry 917
*Laboratory Ore Crusher 325
*Laboratory Work Under Smelting Conditions 478, 479
*La Bud & Barton's Pat. Gold Separator 490
Lackawanna Steel Co. Negaunee Mine Purchase 147
Ladle-Tilting Device, Patterson & Acklin's Pat. 933, 934
*Laidlaw-Dunn-Gordon Co. Air Compressors for St. Louis Exposition...., 164
Lake Cargoes, Large....257, 855, 975, 1,049
Lake Copper Miners' Strike..... 303
Lake Copper Mining in 1903.....10, 804
Lake Freight Rates.....50, 1,031, 1,064
Lake Iron Miners' Wages..... 87
Lake Iron Mines, Labor in..... 136
Lake Iron Ore Association, Dissolution. 752
Lake Iron Ore, Original Source of..... 286
Lake Iron Ore Prices.....307, 785
Lake Iron Ore Shipments..46, 67, 84, 176, 205, 325, 804, 1,055
Lake Iron Region in 1903..... 84
Lake Masters' & Pilots' Association.. 1,031
Lake Ships, Steel 242
"Lake Superior Iron Region During 1903" 688
Lake Superior Meeting, American Institute of Mining Engineers 907
Lake Superior Region, Survey of..... 638
Lake Traffic 838
Lake Traffic, Interference by Strike...; 832
"Lake Winnebago and Green Lake, Plankton of" 890
La Luz Tunnel Co., Mex..... 849
Lamargese's Pat. Case-Hardening Steel 410
Landes, Henry, "Coal Depcsits of Washington" 445
Lane, A. C., "Theory of Copper Deposition" 526
Lang, Herbert, Sulphide Smelting..... 113
Langerfeld's Pat. Separator..... 410
*Langerfeld Slate Picker 319

•Langton, John, Power Plant of the Montezuma Copper Co., Mex..... 359
Language, Correct Use of..109, 110, 831, 953, 996
Lanius' Pat. Amalgamator and Concentrator 529
Lanyon Zinc Co. Experiments to Determine the Reduction Temperature of Zinc Oxide 1,045
Lanyon Zinc Co. and Roasting Furnace Litigation 549, 712
Lapland, Gold Mining 285
"Laramie Cement Plaster"..... 610
Lardeau District, B. C..... 400
"Larimer County Gypsum, Colo."..... 610
•Laschinger, E. J., Tailings Elevators.. 481
Lash's Pat. Ingot 130
Lash's Pat. Steel Making..... 530
Last Chance vs. Bunker Hill & Sullivan Mg. Co., Idaho 912
Laszcynski's Pat. Electrolytic Process. 694
Latch for Mine Car Doors. Smith's Pat. 330
Laudahn's Pat. Gold Separating and Recovering 974
Laurenius' Pat. Coke Retort..... 170
•Lawrence, Benj. B., on Arthur L. Collins 878
Lawrence, Benj. B., Bureau of Mining. 114
Lawrence, Benj. B., Labor Conditions in Colorado 1,051
Leaching, Stead's Pat. 773
Leaching Vat, Broken Hill Proprietary Co.'s Pat. 130
Lead in 1903 11
"Lead Accumulator, Theory of"..... 848
Lead Bounty in Canada..25, 211, 532, 656, 936, 1,017
Lead Deposits, Wisconsin 74
Lead Exports, Canada 394
Lead Exports, New Caledonia..... 622
Lead Exports, Spain.....161, 687, 840
Lead Imports and Exports, Germany, 344, 867
Lead Imports and Exports, Great Britain 143, 344, 504, 707, 868, 1,028
Lead Imports and Exports, U. S..4, 11, 223, 382, 544, 747, 907
"Lead in Louisiana" 1,011
Lead Market in 1903.....12, 13
Lead Market and Prices.....Weekly
Lead Mines of Balia, Turkey.....274, 691
Lead Mining Accidents, Missouri..... 119
Lead Mining in British Columbia..... 12
Lead Mining, Utah 110
Lead Ore in Burnet County, Texas, 364, 1,011
Lead Ore, Desulphurizing, Savelsberg's Pat. 530
Lead Ore Treatment, Engels's Pat..... 529
Lead Ore Treatment, Rider's Pat..... 774
Lead Pigment Production, U. S.....4, 5
Lead Pigment, Scholz's Pat..... 170
Lead Production, British Columbia..... 24
Lead Production, Canada 393, 648
Lead Production, Colorado 86, 434
Lead Production, Great Britain..... 430
Lead Production, Idaho 13, 81
Lead Production, Missouri 13, 80
Lead Production, U. S.....4, 11
Lead, Recent Literature on Geology of, 365, 770, 1,011
Lead Roofs 969
Lead Salts, Making, Mills' Pat..... 490
Lead, Southeast Missouri in 1903..... 13
Lead in Southeast Missouri, Notes on Source of 517
Lead for Storage Batteries 150
Lead-Zinc Deposit, New, in Germany... 445
"Lead and Zinc Deposits of Illinois".. 1,011
"Lead, Zinc and Fluorspar Deposits of Western Kentucky" 366
Lead-Zinc Pigment Production, U. S....4, 5
•Lead and Zinc Slimes Treatment in Joplin 683
Lead-Zinc Sulphide Treatment, Miller's Pat. 250
Leadville Mines in 1903..... 86
Leak-Detector for Tuyeres, Kloman's Pat. 813
Leavitt, T. H., "Facts About Peat," 366, 930
Lecarne's Pat. Cementation of Iron.... 90
Ledebur, A., "Hand-book of Iron and Steel Metallurgy" 570
Ledebur, A., "Inaugural Address at Freiberg Mining Academy" 126
Ledge, Limitation on Right of Owner to Follow Beyond His Own Line..... 652
Ledoux, A. R., American Mining Engineer 310
Lee, H. A., Bureau of Mining..... 192
Lee, H. A., "Larimer County Gypsum, Colo." 610
Lee, H. H., Quest of the Golden Fleece 998
Lehigh Canal Coal Traffic 164
Lehigh Coal & Navigation Co., Cost of Producing Coal 348
Lehigh Coal & Navigation Co., Report.. 367
Leihman's Pat. Ingot Mold 654
Leichman's Pat. Coal Cutter..... 370
Leigh's Pat. Rock Drill Chuck..... 250
Leith, C. K., "Lake Superior Iron Region in 1903" 688
Leith, C. K., Mesabi Range 431
Lenderoth's Pat. Composition of Matter 409
Lenher, Victor, "Electric Furnace".... 930
Lenher, Victor, "Solubility of Gold in Certain Oxidizing Agents" 890, 963
Lentz's Pat. Renewing Rails..... 409
Lentz's Pat. Rolling Mill..... 409
Le Roi-Centre Star-War Eagle Mines, Proposed Consolidation 912, 936
Le Roi Mine, B. C., Sampling at..... 992
Le Roi No. 2 Mine, B. C., Report..... 332
Lesley, Robert W., "Cement Age"..... 848
Lesley, Robert W., Recent Developments in Portland Cement Industry.. 81
Lessee, Liability When There is No Ore 408
Le Sueur's Pat. Copper Extraction.... 529
"Lettering, Free-Hand" 1,011
Leucite, Treating, Ceribelli's Pat..... 170
Levat, E. D., Coal and Petroleum in Central Asia 565
Lewiak's Pat. Condensing and Bleaching Oils 250
Lewis, E. A., on Effect of Impurities on Commercial Copper 284
Lewis' Pat. Mine Door..... 653
Lewis' Pat. Safety Clamp for Mine Cage 694
Lewis' Pat. Safety Device for Hoists.. 129
Leyner's Pat. Ejecting Rock from Drill Holes 653
Liberty Bell Gold Mg. Co., Mining Cost 712
•Liberty Bell Gold Mg. Co., Colo., Report 731
•Lidgerwood Electric Mining Hoist..... 365
Lieb's Pat. Coal Briquettes..... 574
Lien on Mining Property for Services of Foreman 289
•Lignite and Peat, Utilization of..... 562
Lime, Acetate, Exports, U. S..542, 745, 945
Lime, Acetate Industry, Michigan..... 585
Lime Exports, U. S.....381, 542, 745, 945
"Lime, Hydroborate Deposits" 406
Lime, Melting Point at High Temperature 10
Lime Production, Ontario 648
Lime Production, Quebec 800
Lime Slaking, Rich's Pat..... 973
Lime, Some Sources of Error in Estimation of 688
Lime Waste, Utilizing, Oliver & Bevan's Pat. 210
Limestone, Demand for, in California.. 775
Limestone Flux Production, Canada.... 393
Limestone Flux Production, U. S....4, 5
Limestone Production, Great Britain... 430
Limestone Production, Newfoundland... 969
"Limonite Ores of Pennsylvania"..... 485
"Linares Lead Mining, Spain".....1,011
Lindgren, Waldemar, "Mineral Deposits of Bitter Root Range and Clearwater Mountains, Mont." 649
Lindley, Curtis H., "Treatise on American Law Relating to Mines and Mineral Lands" 650
Lipari Islands Pumice Stone Combination 342, 745
Liquid Air, Separating into Oxygen and Nitrogen, Dumars' Pat..... 129
Liquids, Circulating in Tanks, Dunton's Pat. 734
Litharge Production, U. S.....4, 5
Lithographic Stone, Iowa 565
Lithophone Imports, New York..... 221
Littlehales, G. W., "Finding the Locus of Geographical Position and the Compass Error" 246
Littleton's Pat. Clutch Head for Rock Drills 773
"Living, Getting" 246
Lixiviating Ores, Naef's Pat..... 130
Lloyd, R. L., Experiments with Reverberatory Furnaces at Anaconda 716
•Lloyd, R. L., Klepetko Water-Jacket.. 796
Loading Machine, Doss' Pat..... 654
Loading Machine, Holmen's Pat.....1,054
Loading Machine, Killian's Pat..... 973
Loading Machine, Merkel's Pat..... 210
Loading Machine, Myers' Pat..... 973
Lobnitz's Pat. Dredge Screen..... 734
Locating Mineral Claims in California.. 615
Locating Mineral Claims, Celebrated Litigation Over 912
Locating Mineral Claims in Colorado... 655
Locating Mines in Montana, Insufficiency of Declaratory Statement..... 652
Location, Amending 572
Location of Claim by an Agent, Validity of 449
Lock, Magnetic, for Miners' Safety Lamps, Wiedenfeld's Pat. 129
Locking-Latch for Doors of Coal-Cars, Correll's Pat. 449
•Locomotive Oil Burner 772
Lode Discovery New Notices Not Necessary Against One Who Has Never Perfected His Own Claim..... 852
Lode-Structure and Faults 792
London Copper Market in 1903..... 9
London Copper Market and Prices...Weekly
London Lead Market in 1903..... 13
London Mining Market in 1903..... 62
London Mining Stock Market.....Weekly
London Silver Shipments to the East.Weekly
London Spelter Market in 1903..... 16
London Spelter Market and Prices...Weekly
London Tin Market in 1903..... 19
London Tin Market and Prices.....Weekly
"London and West-Country Chamber of Mines Records" 570
Long's Pat. Hoist and Conveyor..... 573
Long vs. Williams 128
Look's Pat. Centrifugal Pump..... 370
Lotz's Pat. Wire Solder Rolling Machine 450
Louisiana, Coal for 99
"Louisiana, Lead in" 1,011
"Louisiana, Oil in" 930
Louisiana, Sulphur 826, 1,026
Lowe's Pat. Gas Manufacture..... 249
Lubricant, Smith's Pat. 89
Luke's Pat. Grapple 489
Lund, H., Iron Ore Deposits of Varanger 553
Lunge's Pat. Making Sulphuric Anhydride 774
Luttrell & Cantrell's Pat. Cement Brick Machine 894
Lyndon, Lamar, "Storage Battery Engineering" 366
•Lytle Colliery Hoisting Engine 567

M

Macadam's Pat. Greasing Hoisting Ropes 1,013
McAuley's Pat. Pulverizer..... 130
McCabe's Pat. Conveyor..... 450
McCall's Pat. Air Compressor..... 934
McCaughey's Pat. Bucket Dumping Apparatus 90
McCharles, A., Smelting Sudbury Ores. 232
McCharles, A., Sudbury Nickel Mines.. 14
McClellan's Pat. Coal Handling..... 169
McClenahan's Pat. Manufacturing Stone 693
McCormick's Pat. Crusher..... 290
McDermott, Walter, Oil for Concentration of Ores..... 153
McDonald & McKee's Pat. Conveyor... 450
•McDonald's Pat. Digging and Loading Machine 489
•McDonough Pat. Stamp Battery Guide. 530
McDougal Furnace Calcines, Analysis of 922
McDougal Roasting Furnace..... 274
Macdougal's Pat. Coke Lorry..... 90
McDowell, John, Method for the Estimation of Cyanogen..... 961
McEvoy, James, Mining in the Crow's Nest Coal-Field..... 601
Macgeorge, A. J..... 752
Macgeorge, A. J., Management of Australian Mines..... 637
MacKay's Pat. Furnace..... 249
McKay's Pat. Centrifugal Pump..... 573
McKee's Pat. Well Drilling Machine... 90
•Mackenzie, George L., Determination of Tin in Tailings and Slimes..... 928
Mackie's Pat. Making Charcoal..... 694
McKinlay, Wm. B., Words and Their Ways 996
McKinlay, Wm. B., Bureau of Mining. 271
McKinney's Pat. Bit for Coal Mining Machines 370
McKinnon's Pat. Automatic Bucket Dumping Device 734
Mackrow & Cameron's Pat. Depository for Coal 129
•McLanahan & Stone Ore Washer..... 962
Maclaren, J. Malcolm, "Occurrence of Gold in Great Britain"..... 485
McLaughlin's Pat. Treating and Cleaving Slate 90
McLennan, Dr., on Radium..... 401
MacLennan's Pat. Storage Apparatus for Coaling Stations..... 934
McLeod, Alexander, Nova Scotia Gold Mines 89
•McLeod Gorge Copper Outcrop, Cape Breton 283
Macleod, W. A., "Metallurgical Analysis and Assaying".....126, 810
McMichael Coal Co., Pa..... 982
McMurtry's Pat. Cooling Rack for Bars 409
Macnamara's Pat. Diamond Drill..... 490
Madagascar, Gold Production.....6, 10
Maddern's Pat. Roasting Furnace..... 170
•Magmas, Igneous, Deposition of Ores from....71, 117, 157, 199, 237, 272, 312, 472, 675. 756
Magmas, Acidic, Their Exhalations and Residues 351
Magnesia Cement, Bidtel's Pat..... 654
Magnesia, Melting Point at High Temperature 10
Magnesite 714
Magnesite, Melting Point at High Temperature 10
Magnesite Mining, California..... 491
Magnesium, Volumetric Method for the Determination of 478
•Magnetic Concentration of Zinc Ore in Virginia 1,001
Magnetic Iron Sand in Java.....1,049
"Magnetic Ore Deposits, Location and Examination of Magneto-metric Measurements" 126, 207
Magnetic Separator, Edison Pat....490, 813
Magnetic Separator, Payne's Pat.....1,014
Magnetic Separator, Snyder's Pat..... 490
Mahoney's Pat. Excavator..... 409
•Mahoning Mine, Minn..... 50
•Maibong Camp, Korea..... 554
Maine Incorporation Laws..... 593
"Maine Labor Statistics"..... 869
Maitland, A. Gibb, "Geological Map of the Boulder Reef"..... 286
Maitland, A. Gibb, "Geological Map and Results of Boring for Copper and Lead in W. A."..... 446
Malay Peninsula, Gold Production..... 6
•Malcolmson, Jas. W., Mining in Mexico 21
•Malcolmson, J. W., New Quicksilver Mining District 685
Mallery, Willard, Native Gold in Igneous Rocks..... 506
Mallet & Parent's Pat. Charging Accumulators 230
Mallette's Pat. Concrete Building Blocks 249
Malone's Pat. Cement-Plaster Kettle... 614
•Mammoth Mine, Ariz..... 639
Manchuria, Coal in..... 14
Manganese Borate, Duty on.....1,053
Manganese Metal Market..... 788
Manganese Ore 528
Manganese Ore, Arkansas.....1,058
"Manganese Ores of the Cartersville District, Ga."..... 809
"Manganese Ore Deposits of Georgia. Geological Relations of"..... 809
Manganese Ore Exports, Canada..... 393
Manganese Ore Exports, Spain..... 241
Manganese Ore Imports and Exports, U. S. 285
"Manganese Ore Production"..... 526
Manganese Ore Production, Great Britain 430
Manganese Ore Production, Leadville, Colo. 86
Manganese Ore Production, Russia..... 809
Manganese Ores, Recent Literature on Geology of..... 809
Manganese in Steel..... 994
Manganese Steel, Hadfield's Pat..... 370
Mannie Quadrangle, Topography of..... 74
Mann's Pat. Blast Furnace Bell Device 654
Mansfield's Pat. Valve..... 653
Maps of Mining Districts—Aid to Travel 507
Marble, Carrara 509
Marble Polishing Machine Head, Higgins's Pat..... 853
Marble, Varieties of..... 834
Marcus' Pat. Conveyor..... 693
Marcy, Frank E., Improvement in McDougall Furnace..... 274
Marfa & Mariposa Quicksilver Co., Tex, Plan 685
"Marine Review"..... 486
"Mariposa Co., Cal., Register of Mines and Minerals"..... 326
Marsden's Pat. Burning Sulphur..... 129
Marsh, C. Dwight, "Plankton of Lake Winnebago and Green Lake"..... 890
Martin, F. W., "Laboratory Guide to Qualitative Analysis with the Blowpipe" 167
Martin, G. C., "Petroleum Fields of Alaska" 930
Martin's Pat. Battery Stem-Guide..... 330
Martin's Pat. Insulating Wires.....1,014
Marvin Electric Drill..... 891
Maryland, Coal Production..... 52
Maryland, Gold Production..... 5
"Maryland Mine Inspector's Report".8S, 207
Maskrey's Pat. Rolling Metal Plates... 290
Maskrey's Pat. Tin Plate Cleaner..... 490
Mason, Hobart, "Static Electricity".... 809
Masonry for Underground Workings.... 693
Mason's Pat. Coke Oven Door Hoist... 654
"Masontown-Uniontown Folio"..... 570
"Massachusetts, Health Report"..... 246
Massachusetts Institute of Technology New Departure in Mining Education.. 230
"Massachusetts, Social and Industrial Condition of the Negro in"..... 485
Massenez's Pat. Manufacturing Steel... 450
Massenez's Pat. Slag Treatment..... 974
Match Composition, Grimm's Pat..... 573
Match Composition, Wendel's Pat..... 450
Mather, H. A., Technical Education... 876
"Mathieson's Hand-Book for Investors" 246, 689
"Mathieson's Railway Statistics"..... 689
Matte, Converting, Aiken's Pat..... 530
Matte Smelting. (See also under Pyrite Smelting.)
Matte Smelting, Garretson's Pat..... 814
Mattes' Pat. Gas Generator..... 894
Mattes, W. F., Mineral Land Laws....1,036
Matzek's Pat. Making Steel Castings.. 734
Maxwell, Henry V., Mining in Eastern North Carolina 168
Maxwell's Pat. Coke-Oven..... 934
•May Kirby Mine, Nev..... 201
Maylan's Pat. Rock Drill..... 330
"Meadow Branch Coal Field of West Virginia" 848
Mechanical Conveyors 640, 681
"Mechanical Drawing, Manual".....8S, 486
"Mechanical Engineers' Reference Book" 287
Mechanical Ingenuity in Mining..... 474
Mechwart, Coltri & Co.'s Pat. Electrolytic Extraction of Metals..... 410
Meerschaum, Imitation 806
Megraw, Herbert A., Cyanidation of Sands 272, 597
Mehner's Pat. Making Nitrogen Compounds from Atmospheric Nitrogen.. 489
Meissner's Pat. Dump-Car.....409, 489
Melting Furnace, Barker's Pat..... 210
Melting Furnace, Charlier's Pat..... 370
Melting Furnace, Rousseau's Pat..... 130
Melting Furnace, Southern's Pat..... 893
Melting Metals, Hoerder Bergwerka & Hutten Verein's Pat..... 410
Melting Point of Metals..... 322
Melville, Admiral, In Defense of..... 849
Melville, George W., and Mexican Mine Investment 713
Mendenhall, Walter C., "Mineral Resources of Mt. Wrangel, Alaska".... 649
"Menominee Iron-bearing District, Monograph" 650
Mensch, L. J., "Re-inforced Concrete Construction" 446
Menzel, C., "Year-Book of Mining and Metallurgy in Saxony"..... 930
Merkel's Pat. Loader..... 210
•Merralls' Pat. Multiple Stamp Mortar. 370
Merralls' Pat. Rock Breaker..... 289
Merralls' Pat. Stamp Mill.....410, 653
Merrill, Elmer D., "Philippine Plants" 729, 770
Merrill, F. J. H., "Description of the State Geologic Map"..... 848
Merrill, George P., "Non-Metallic Minerals" 485, 690
Merrill's Pat. Still..... 933
Merton's Pat. Roasting Furnace..... 814
•Mesabi Iron Ores, Concentration of.... 960
Mesabi Range, Minn..... 431
Mesh vs. Aperture..... 70
Mesh, Meaning of..... 792
Metal Articles, Hollow, Polte's Pat.... 614
Metal Bars, Cutting, Edwards' Pat.... 693
Metal Bars, Flanged, Grey's Pat..... 734
Metal Bars, Reducing into Sheets, Allis' Pat..... 654
Metal Castings, Stroh's Pat..... 573
Metal Coating, Johnston's Pat..... 813
Metal Ingot, Rowley's Pat..... 734
Metal Mines, Electric Haulage in..... 324
"Metal Mining" 930
Metal Prices 468
Metal Prices and the War in the East. 307
"Metal Production and Prices"..... 526
Metal Production, Valuing.....512, 552, 595
Metal Sheets, Paterson's Pat..... 330
Metal Tongs, Oakley's Pat..... 654
Metal Trades, Conditions in..... 912
Metalia, Ltd., London.....229, 433, 447
Metallic Car, Stucki's Pat..... 330
Metallic Currency, Use of..... 691
Metallic Tube Machinery, Jackson, Town & Lloyd's Pat..... 370
"Metallography" 126
"Metallurgical Analysis and Assaying" [illegible] 126, 810
Metallurgical Apparatus, Gesner's Pat.. 574

•Metallurgical Chemistry Laboratory... 917
Metallurgical Enterprise in England, Decline of 196, 511
Metallurgical Enterprise in Wales..... 795
Metallurgical Furnace Attachment, Falk's Pat. 693
Metallurgical Furnace, Dempsey's Pat. 170
Metallurgical Furnace Feeder, Gaines' Pat. 854
Metallurgical Furnace Hot-Blast Apparatus, Gaines' Pat. 813
Metallurgical Furnace, Kepp's Pat..... 410
"Metallurgical Products" 446, 526
•Metallurgical Progress in Western Australia 30
Metallurgists, Assayers and Chemists, Western Society for..... 878
Metallurgy and Mining, Wastes in..718, 798
Metallurgy, Revolutionary.....229, 433, 447
Metallurgy of the Transvaal..... 928
"Metaloides, Analyses of"..... 446
Metals, Extracting by Chemical Process, Joseph's Pat..... 734
Metals, Precipitating from Solutions, Butters' Pat..... 613
Metals, Protecting, Burns' Pat..... 653
Metals, Recovering from Ores or Sands, Jory's Pat..... 893
Metals, Recovering from Solutions, Anderson's Pat..... 813
Metals, Uniting, Wherry's Pat..... 210
•Metcalf and Shannon Hills, Ariz..... 680
Metcalf's Pat. Steel Concrete Construction 410
Metcalf, William, on Alloy Steels.....1,057
Meteorite 274
"Meter Practice in America"..... 446
"Metric Failure in the Textile Industry" 166
"Metric Fallacy" 166
Metric System in England..... 190
Mexican Dollars, Demand for..... 227
Mexican Exhibit at St. Louis Exposition 817
Mexican Export Duties on Metals..... 488
Mexican Geological Society..... 754
Mexican Mine Investments on Recommendation of a Naval Engineer..... 713
"Mexican Mining Law Encyclopedia".. 930
Mexican Monetary Committee's Recommendations 93
Mexican National Bank Statement..... 937
Mexican Tariff 831, 847
Mexico, Alabama Coal for..... 499
Mexico, Coal 190, 977
Mexico, Copper Production.....8, 794
•Mexico, Guanajuato Mining District.. 599, 642
"Mexico, Industrial Statistics"..... 650
Mexico, Iron and Steel Duties..... 307
Mexico, Mining Concessions in..... 932
Mexico, Mining Dividends.....63, 94
•Mexico, Mining in..... 21
Mexico Mining Stock Market.....Weekly
Mexico, Nitrate of Soda Deposits..... 625
•Mexico, Ocampo District..... 515
•Mexico, Ore Dressing at Cananea.....1,044
•Mexico, Power Plant of the Moctezuma Copper Co. 359
Mexico, Salt.....133, 576
•Mexico, Simple Head-Frame in..... 483
•Mexico, Smelter Stacks in..... 203
•Mexico, Some Suggestions for Travel in Northern..... 315
Mexico, Sulphur.....133, 674, 776
Mexico, Sulphur Deposits of Popocatapeti 730
Mexico, Wollastonite Rock-Mass in.... 364
Meyer, Muffle Furnace..... 274
Meyer's Pat. Drying Kiln.....1,053
•Meyer's Pat. Roasting Furnace....249, 973
"Mica in Brazil"..... 729
Mica Exports, Canada..... 394
Mica Imports, New York..... 221
Mica Production, Canada..24, 393, 648, 800
"Mica Production in 1902"..... 485
Michant, Albert, "Gold Industry of Transvaal" 770
Michigan, Acetate of Lime Industry... 585
Michigan, Bromine Production..... 56
Michigan, Coal Production..... 52
Michigan, Copper Mining Accidents.79, 120
Michigan, Copper Production..... 10
"Michigan Engineer" 689
Michigan, Iron Ore Production..... 205
Michigan, Iron Ore Shipments..... 84
"Michigan Labor and Industrial Statistics" 689
Michigan, Potassium Bromide Production 56
Michigan, Silver Production..... 5
"Michigan Technic".....446, 890
Michipicoton Iron Ore Shipments, Can.. 46, 325
Miles' Pat. Plate Handling Machine.. 369
Mill-Building Construction, Hollow-Brick for 514
Mill-Building Construction, Iron and Steel for 80, 350
Mill Buildings, Design of..... 522
"Miller County, Mo., Geology".689, 770, 810
Miller, E. H., "Quantitative Analysis for Mining Engineers".....446, 486
Miller, Grant D., Assay of Cyanide Solution 997
Miller, W. G., on Undeveloped Mineral Resources of Ontario..... 401
Miller's Pat. Cableway..... 853
Miller's Pat. Conveyor.....813, 893
Miller's Pat. Hoisting Engine Drum.... 933
Miller's Pat. Ore Treatment..... 250
Milling Practice at Daly-West Mine.. 752
•Milling Practice, Notes on..... 70
Milling in Utah..... 604
Mills' Pat. Making Ammonium Nitrate 490
Mills' Pat. Making Fluorides and Silicates 530
Mills' Pat. Making Lead Salts..... 490
Mills' Pat. Making Nitric Acid..... 530
Mills, S. Dillon, Faulting at Globe..... 915
Mills, S. Dillon, Radium in Zinc-Blende 571
Millward's Pat. Coal Cutter..... 130
Milne's Pat. Temperature and Moisture Regulator 574
Milne's Pat. Treating Peat....., 574
Milwaukee Coke & Gas Co., New By-Product Coke-Oven Plant..... 929
Minchin, Juan B., Tin Production in Bolivia 244
Mine Accidents, Fatal in U. S.....79, 119
Mine Accidents in Colorado.....80, 120
Mine Accidents in Great Britain....79, 204
Mine Accidents and the Law..... 837
Mine Accidents in Montana..... 79
Mine Accidents, Statistics of..... 108
Mine Accounting, Amortization..... 875
Mine Accounting, Depreciation..... 270
Mine Bulkheads, Note on the Construction of 483
Mine Cage Clamp, Hewitt's Pat..... 574
Mine Cage Safety Catch, Howells' Pat. 330
Mine Cage Safety Catch, Lewis' Pat. 694
Mine Cage Safety Grip, Thomson & Smith's Pat 854
Mine Cage Safety Stop, Henrard's Pat. 894
•Mine Car, Allen's Pat..... 529
Mine Car Attachments, Dunstan's Pat. 410
Mine Car Axle Box, Ward, Weeks & Jones' Pat. 8, 170
Mine Car, Bushler's Pat..... 490
Mine Car Coupling, Evans' Pat..... 330
Mine Car Coupling, Galloway's Pat.... 210
Mine Car Coupling, Morgan's Pat..... 814
Mine Car Coupling, Pughsley's Pat.... 774
Mine Car Coupling, Rutherford & Thompson's Pat..... 854
Mine Car Coupling, Walker's Pat..... 934
Mine Car Lubricator, Thornley's Pat.. 814
Mine Car, Shaw's Pat..... 654
Mine Car, Stucki's Pat..... 933
Mine-Curtain Raiser, Diebold's Pat.... 614
Mine Custom, Erroneous Instruction as to 489
•Mine Dam, Construction of..... 965
Mine Door, Lewis's Pat..... 653
Mine Doors, Working, Dreckman & Marx's Pat..... 250
Mine Equipment and Ore Reserves..468, 475, 512, 632, 636, 712, 715, 835, 995
Mine Explosions, Coal Dust as a Factor in..... 753
Mine Fires, Checking, Wysocki's Pat.. 210
Mine Haulage, Electric..... 558
Mine Laboratory Equipment...551, 555, 676
Mine Management in Australia....637, 872
Mine Operator's Negligence, Proof of.. 89
•Mine Pump, High Speed Motor-Driven.1,010
Mine Sampling.....151, 271, 631
Mine Shaft Door, Wineland's Pat..... 450
Mine Shaft Safety Device, Dickerson's Pat. 89
Mine Shafts, Circular or Rectangular for Coal 952
Mine Stores Consumption in Transvaal. 484
•Mine Timber, Brunton's Pat..... 813
Mine Timbers, Decay of..... 892
Mine Timbers, Preserving..... 732
Mine Timbers, Removing, Bonsall & Barnes' Pat..... 330
Mine Trap-Door, Flint & Whitney's Pat.1,014
•Mine Ventilating Fan, Sirocco..... 608
Mine Ventilation.....427, 431, 632
Mine Ventilation, Clifford's Pat..... 369
Mineral Embraces "Rock" Under Surface of Land..... 812
Mineral Land Laws.....952, 958, 1,036
Mineral Paint Industry, Canada..... 531
"Minerals, Non-Metallic".....485, 690
Mineral Soap..... 834
"Mineral Tables" 286
Mineral Wagon Door Attachment, Morgan's Pat. 1,014
Mineral Water Production, Canada..... 393
Mineral Waters, Radium in..... 761
Miner, Reliance of on Promised Repair. 289
"Miner's and Prospector's Pocket Guide" 1,050
Miners' Candles for South Africa..... 156
•Miner's Candlestick, Packer's Pat..... 854
Miner's Candlestick, Rusden's Pat..... 370
Miner's Check-Holder, Adams's Pat... 369
Miner's Drill, Cox's Pat..... 530
Miner's Drill, Royer's Pat..... 934
Miner's Drill, Tonge's Pat..... 410
Miner's Drill, Walker's Pat..... 330
Miner's Electric Lamp, Prested's Pat.. 130
Miner's Inch..... 834
Miner's Lamp, Anton's Pat..... 574
Miner's Lamp, Electric Lighting, Darrah & Patterson's Pat..... 530
Miner's Lamp, Hadley's Pat..... 654
Miner's Lamp Holder, Brown's Pat.... 90
Miner's Lamp Holder, Danner's Pat.... 973
Miner's Lamp, Lighting, Best's Pat.. 330, 734, 854
Miner's Lamp, Lighting, Wiedenfeld's Pat 376, 1,054
Miner's Lamp, Locking, Williams' Pat. 450
Miner's Lamp, Moore & Sage's Pat.. 128
Miner's Lamp, Naylor's Pat..... 90
Miner's Lamp, Patterson & Darrah's Pat 130
Miner's Lamp, Sedgwick & Smith's Pat. 774
Miner's Lamp, Wiedenfeld's Pat..... 130
Miners' Phthisis.....871, 915
Miners' Phthisis, Prevention of..... 994
Miner's Pick, Beeton & Wardell's Pat.. 530
•Miner's Pick, Hardsocg's Pat..... 814
Miner's Pick, White's Pat.....129, 894
Miner's Tool, Des Moineaux's Pat..... 370
Miners' Wages, Western Australia..... 28
"Mines and Quarries, U. S. Census"....1,050
Mines, Floating 713, 931, 991
Mines, Floating by Means of a Prospectus 1,047
Mines, Life of..... 752
Mines, Naming of..... 992
Mines, Opinion on..... 931
Mines, Valuing..... 552
Mining Bureau for Canada.....672, 674
Mining Bureau for U. S..68, 113, 114, 151, 191, 192, 233, 234, 271, 273, 309, 314, 351
"Mining Claim, How to Hold and Locate" 1,058
Mining Claims, Surveying Boundaries of. 892
Mining Companies, "Wild-Cat"..... 228
Mining Company Liability to Attorney Under General Engagement..... 488
Mining Concessions in Mexico..... 933
Mining Costs at Cripple Creek, Colo... 70
Mining Education.....672, 832, 836
Mining Education, New Departure in.. 230
Mining Education on the Rand..... 388
Mining Engineer, American..... 310
Mining Engineer's Ethics.....1,034
Mining Engineers' Reports and Mine Promotion 991
Mining Engineers, Responsibility of.... 673
Mining and Excavating Machine, Thompson's Pat.....1,054
Mining Finance, Some Aspects of....153, 675
"Mining Finance, Pitfalls of".....1,050
Mining Graduate..... 992
Mining, Heredity in..... 551
•Mining Hoist, Lidgerwood Electric... 365
"Mining Industry, Text-Book"..... 610
Mining Investments..... 234
"Mining Law, American"..... 650
Mining Law in California..... 695
"Mining Law of Spain".....1,050
Mining Law, Tasmania..... 32
Mining Law, U. S.....952, 958, 1,036
Mining Lease, Limitations..... 733
Mining Machine, Dierdorff's Pat..... 289
Mining Machine Engine, Heenan's Pat.. 734
Mining Machine, Jeffrey's Pat..... 290
Mining Machine, Rauscher's Pat..... 329
Mining Machine, Sessions & Norris' Pat. 894
Mining Machinery, American, in Russia. 514
Mining Machinery Exports, Great Britain 523
Mining Machinery Imports, Canada..... 553
Mining, Mechanical Ingenuity in..... 474
Mining and Metallurgy, Wastes..718, 798
"Mining and Mining Investments".....1,050
Mining Nomenclature, Confusing..109, 110, 831, 953, 996
Mining Possibilities..... 2
Mining Property, Lien on, for Services of Foreman 289
Mining Property, Taxing..... 509
"Mining and Quarrying, Elements of" 286, 366
•Mining Regulations for the Jehol Region, China..... 433
Mining Stock Markets and Quotations: Boston, Colorado Springs, London, Mexico, New York, Salt Lake City, San Francisco.....Weekly
Mining Stock Quotations: Duluth, Minn.; Paris, St. Louis, Toronto.....Weekly
Mining and Superstition..... 903
Mining Timbers, Sawing, Edwards's Pat. 410
Minnesota Iron Mines, Labor in..... 176
Minnesota Iron Mines, Power for.....1,016
Minnesota, Iron Miners' Wages..... 941
•Minnesota, Iron Ore Concentration in.. 960
Minnesota, Iron Ore Production..... 205
Minnesota, Iron Ore Shipments..... 84
Minor Metals and Alloys, Prices.....Weekly
Minor Minerals Production, U. S., in 1903 74
•Missouri Coal Field..... 564
Missouri, Coal Production..... 52
Missouri Cobalt Production..... 13
Missouri Geological Survey Records, System of Keeping..... 74
Missouri, Joplin District in 1903..... 17
Missouri Lead Ore Market and Prices.. Weekly
Missouri, Lead Production.....13, 80
Missouri Lead and Zinc Mining Accidents 119
Missouri, Nickel Production..... 13
Missouri, Rain in..... 581
•Missouri, Slime Treatment in Joplin... 683
Missouri, Southeastern Lead District in 1903 13
Missouri, Southeastern Lead, Notes on Source of..... 517
Missouri, Southeastern, Mining..... 280
Missouri Southern Railroad..... 14
Missouri Statute, Construction of..... 168
Missouri, Tin Mining in the Ozarks.... 323
•Missouri Zinc Industry in 1903..... 80
Missouri Zinc Ore Market and Prices.. Weekly
Missouri, Zinc Production.....13, 16, 80
"Mitchell Geologic Folio".....366, 610
Mitchell's Pat. Slag-Car..... 934
Mixer, Gandolfo's Pat..... 773
Mixer, Morgan Crucible Co.'s Pat..... 90
Mixing Machine, Ransome's Pat..... 934
•Moctezuma Copper Co. Power Plant.. 359
Moffet & Keiser's Pat. Ore Chute..... 369
Mohawk Mg. Co., Mich., Report..... 652
Moil, A., "Mining and Mining Investments" 1,050
Moissan, Henri, "Electric Furnace"..... 930
Moisson, Henri, on Solubility of Silicon in Metals.....1,037
Moisson, Henri, on New Method for Making Calcium Carbide..... 689
Mojave Desert, Mining and Milling in.. 154
Mold Car for Use at Copper Converters. 961
Molders' Sand, Tempering, Packer's Pat. 1,014
Mold for Brick, Oosting's Pat..... 894
Mold for Concrete, Porten's Pat..... 974
Mold for Metal-Concrete Construction, Weber's Pat..... 489
Molding Building Blocks, Dow's Pat.... 409
Molding Material, Preparing, Zwoyer's Pat. 250
Molybdenum 168, 1,052
Molybdenum at Crown Point, Wash.... 74
Molybdenum in Oklahoma..... 398
Molybednum Production, Ontario..... 648
Monazite 689
Monell, Ambrose, vs. Benjamin Talbot. 230
Monell's Pat. Ore Slimer.....1,054
Money in U. S.....7, 222, 423, 586, 746, 946
•Monongahela River Coal Mine, Large..1,039
Monongahela River Con. Coal & Coke Co., Report..... 206
Monroe's Pat. Bucket..... 574
Mont Pele..... 872
•Montana 41
Montana Coal Mining.....42, 52
Montana, Copper Mining..... 41
Montana, Cyanide Process in..... 34
Montana, "Fair Trial" Bill.....251, 297
Montana, Gold Dredging.....42, 846, 1,055
Montana, Gold and Silver Mining....41, 42
Montana, Gold and Silver Production... 5
Montana, Insufficiency of Declaratory Statement 652
Montana, Metal Mining Accidents..... 79
•Montana, Topographic Map of..... 842
Montby, Frezel & Coppee's Pat. Aluminum Alloy..... 130
Montel's Pat. Acetylene Gas Generator. 934
Montgomery's Pat. Making White Lead. 330
•Montgomery's Pat. Stamp Mill..... 853
Moody, G. T., on Atmospheric Consumption of Zinc..... 437
Moody, John, "Truth About Trusts"..... 526
Moonstone 634
"Moonta School of Mines Report"..... 848
Moore & Sage's Pat. Miner's Lamp.... 128
Moore's Pat. Coke Quenching and Bleaching 529
Moore's Pat. Distributing Nitrogen Organisms 530
Moran, De Young, & Moser's Pat. Raising Liquids from Deep Wells..... 894
Moran's Pat. Excavator..... 489
Moreing, C. Algernon, vs. Etruscan Copper Estates Co..... 348
Morey's Pat. Tappet for Stamp Mills... 330
Morfa Marsh Coal Mining, Wales..... 767
•Morgan Co., Mo., Coal-Field, Map of.. 564
Morgan Crucible Co.'s Pat. Crucible Furnace 974
Morgan Crucible Co.'s Pat. Cupels..... 974
Morgan Crucible Co.'s Pat. Mixer..... 90
Morgan's Pat. Drill Sharpener..... 774
Morgan's Pat. Mine Car Coupling..... 814
Morgan's Pat. Mineral Wagon Door Attachment 1,014
Morison's Pat. Crusher..... 573
Morning Mill, Idaho..... 923
Morrison's Pat. Building Block..... 409
Mortillet, Leon de, "Les Amalgames et leurs Applications"..... 570
Morwood, B. H., "National Iron and Steel, Coal and Coke Blue Book".... 890
Moscovitz's Pat. Artificial Fuel..... 614
"Mosely Educational Commission to U. S., Reports of"..... 650
•Mother Lode Mine, B. C..... 163
Moudy, R. B., "Laramie Cement Plaster" 610
•Mount Jerome, Cheticamp, C. B..... 283
Mount Morgan Gold Mg. Co., Queensland, Report..... 288
"Mount Stuart Geologic Folio"..... 970
"Mount Wrangel District, Alaska, Mineral Resources"..... 649
Mountain Copper Co., Acid Plant..... 671
Mountain Copper Co., Cal., Report..... 731
Mountain, W. C., on Electric Mine Hoists in Germany..... 886
Moureu's Pat. Making Homologous Propiolic Acid..... 169
Mozambique, Gold Production..... 6
Mozambique, Mining in.....1,032
Muffle, Carter's Pat..... 330
•Muir Friction Clutch..... 206
Munroe, Henry S., Equipment of Mining Laboratories 555
"Murchison Gold-field, W. A."..... 207
"Murchison Gold-field, Geological Sketch Map of"..... 446
•Murphy-Friel Sludge Mill, Mo..... 683
Muslin for Zinc Collectors..... 773
Myers' Pat. Loading Machine for Mine Cars 973

N

•Nacozari Power Plant, Mex..... 359
Naef's Pat. Making Gas.....169, 409
Naef's Pat. Ore Treatment.....130, 613
"Nampa Folio, Idaho-Oregon".....689, 848
Napa Con. Quicksilver Mg. Co., Cal., Report 527
Natal, Coal Production..138, 418, 598, 741, 902, 1,062
"National Academy of Sciences Report" 485
"National Iron and Steel, Coal and Coke Blue Book"..... 890
National Lead Co., Report..... 327
Natural Gas. (See under Gas.)
"Nautical Almanac" 207
Naylor's Pat. Miner's Lamp..... 90
"Nebraskan," Oil Fuel on.....1,015
Negaunee Mine Sale..... 147
Negligence of Mine Operator, Proof of. 89
"Negro Social and Industrial Condition in Massachusetts" 485
•Neill, Jas. W., Utah in 1903..... 42
Nelson's Pat. Amalgamator..... 329
Netherlands, Bank Statement.....Weekly
Netherton's Pat. Ore Picking Table.... 974
Neuburger, A., "Electro-chemists' Calendar" 167

Neukirch's Pat. Coal Cutter.....130, 370
Neumann, Bernhard, "Metal Production and Prices".....526, 930
Nevada 44
Nevada, Bamberger-De Lamar Mine.... 725
Nevada, Bismuth Discovery..... 457
Nevada, Coal-Field.....1,009
Nevada, Cyanide Process in..... 35
Nevada, Gold and Silver Production... 5
Nevada, Law Relating to Assessment Work in..... 528
Nevada, Mining in 1903..... 35
*Nevada, Silver Mines at Candelaria... 150
*Nevada, Silver Peak Region.....759, 891
Newberry, S. B., Requirements for Concrete 518
New Caledonia in 1903..... 20
New Caledonia Chrome Ore for America 350
New Caledonia, Chrome Ore Exports... 377, 622, 863
New Caledonia, Chrome Ore Mining.... 20
New Caledonia, Cobalt Exports.377, 622, 863
New Caledonia, Copper Exports..... 622
New Caledonia, Lead Ore Exports..... 622
New Caledonia, Nickel Exports.377, 622, 863
New Caledonia, Nickel Mining..... 20
New Caledonia, Oil..... 204
New Caledonia Ores and Cost of Making Nickel 727
New Chum Railway Mine, Ventilation at 632
New Idria Quicksilver Mg. Co., Cal., Report 527
Newcomb, H. T., Remedy for Labor Troubles 350
Newfoundland, Barytes Production..... 969
Newfoundland, Brick Production..... 969
Newfoundland, Copper Production....8, 794, 969
Newfoundland, Gold Production.....6, 969
Newfoundland, Granite Production..... 969
Newfoundland, Iron Production..... 969
Newfoundland, Limestone Production.. 969
Newfoundland, Mineral Production..... 969
"Newfoundland, Mineral Resources"... 848
Newfoundland, Pyrite Production..... 969
Newfoundland, Slate Production..... 969
"New Jersey Geological Survey Report".1,050
New Jersey Incorporation Laws..... 593
"New Jersey Labor and Industrial Statistics" 689
New Jersey, Taxing Mining Property in 508
New Jersey Zinc Co., Value of Mines... 508
"New Jersey Zinc Mines"..... 770
Newman's Pat. Dredge..... 329
New Mexico, Coal Production..... 52
New Mexico, Cyanide Process in..... 35
New Mexico, Gold and Silver Production 5
New Mexico, Gypsum.....1,034
*New Mexico, Notes on a Trip to White Oaks 799
New Mexico Ore Deposits, Secondary Enrichment of 153
New Moon Gold Mg. Co., Victoria..... 478
*New Mt. Morgan Shaft, W. A..... 29
*New River Coal-Field Relief Map.... 561
Newsom J. F., "Phosphate Rocks of Arkansas" 610
New South Wales, Coal Mining Machines in 686
New South Wales, Coal Production..31, 638
New South Wales, Copper Production.. 31
"New South Wales, Cretaceous Invertebrate Fauna" 526
New South Wales, Gold and Silver Production 31, 493, 657
"New South Wales, Kerosene Shale Deposits" 88, 486
New South Wales, Mineral Exports.... 978
New South Wales, Mineral Production. 493, 978
New South Wales, Opal Discovery..... 32
New South Wales, Ore Freights..... 172
New South Wales, Quicksilver..... 32
New South Wales, Tin Production..... 31
Newton, Harry J., "Pitfalls of Mining Finance" 1,050
New York Antimony Market.....Weekly
New York, Ammonium Sulphate Imports 745
New York Bank Statement.....Weekly
"New York, Bluestone and Other Sandstone Quarries"..... 407
New York Copper Market in 1903..... 8
New York Copper Market.....Weekly
"New York Geologic Map"..... 848
New York, Geological History of the Hematite Iron Ores of..... 286
New York Geological Survey Work..... 920
New York Gold and Silver Imports and Exports .....Weekly
"New York Gypsum Industry"..... 610
New York & Honduras Rosario Mg. Co., Report 206
New York Iron and Steel Market....Weekly
New York Lead Market.....Weekly
New York Lead Market in 1903..... 12
New York Mining Stock Market.....Weekly
New York Mining Stock Market in 1903. 58
New York Navy Yard, Supplies for..... 461
New York, New Haven & Hartford Co. Railway Purchase..... 673
"New York Railroad Commission Report" 126
New York, Soda Exports.....181, 705
New York Spelter Market.....Weekly
New York Spelter Market in 1903..... 16
New York Tin Market.....Weekly
New York Tin Market in 1903..... 19
New Zealand, American Steel Rails for. 744
New Zealand, Gold Dredging..82, 198, 576, 658
New Zealand, Gold Mining Dividends... 309
New Zealand, Gold and Silver Exports.. 259, 377, 622, 657, 658, 741
"New Zealand, Minerals and Mining Papers" 166
"New Zealand Statistics"..... 650
"New Zealand Year-book"..... 166
*Nicholson, Frank, Progress of the Zinc Industry in Missouri in 1903..... 80
Nicholson, Frank, Wisconsin Zinc Fields.1,011
Nicholson's Pat. Conveyor 410
Nicholson's Pat. Rock Drill Holder..... 854
Nichols's Pat. Traverse Quadrant..... 449
Nickel 1,034
Nickel Assay.....1,004
Nickel Carbonyl Making, Dewar's Pat.. 894
Nickel-Chrome Steel..... 110
Nickel and Copper, Electrolytic Separation of..... 363
Nickel, Cost of Making, from New Caledonia Ores..... 727
*Nickel Deposits of Sohland, Saxony... 363
Nickel Deposits, Sudbury, Ont..... 73
"Nickel Deposits, Sudbury".....1,050
Nickel Discovery, Indo-China..... 14
Nickel Exports, Canada..... 394
Nickel Exports, New Caledonia..377, 622, 863
Nickel Hydroxide, Recovering, Frasch's Pat 1,054
Nickel Imports and Exports, Germany. 868
Nickel Imports and Exports, U. S..4, 223, 383, 747, 907
Nickel-Iron Battery, Edison..... 281
Nickel in Kentucky..... 208
Nickel Market.....Weekly
Nickel Mines, Sudbury, Ont., in 1903.. 14
Nickel Mining, New Caledonia..... 20
Nickel Mining, North Carolina..... 37
Nickel Plate Mine Bulkheads, B. C... 400
Nickel Production, Canada.....23, 393, 648
Nickel Production, Missouri..... 13
Nickel Production, U. S..... 4
Nickel, Recent Literature on Geology of 1,050
Nickel Separation from Cobalt Electrolytically 30
Nickel's Pat. Pulverizer..... 893
Nickel-Steel 874
Nickerson's Pat. Crane..... 330
Nickerson's Pat. Kiln..... 893
Niederlandisch-Deutsche Petroleum Gesellschaft 361
Nielsen's Pat. Rotary Pump..... 250
Nineteen-Hundred-Four Greeting..... 1
Niter Cake, Treating, Parker's Pat.... 490
Niter Cake, Utilizing Waste, Davis' Pat. 1,014
Nitrate Producers' Steamship Co., Report 954
Nitrate Railways Co., Chile, Report... 954
Nitrate of Soda Combination Regulation of Exports..... 905
Nitrate of Soda Consumption in the World.....58, 182, 302, 542, 866, 905, 987
Nitrate of Soda Deposits, Mexico..... 625
Nitrate of Soda Deposits in Tunis.... 433
Nitrate of Soda Exports, Chile..57, 58, 182, 302, 342, 502, 510, 866, 986. 1,065
Nitrate of Soda Imports, Great Britain. 502, 1,026
Nitrate of Soda Industry.....502, 917
Nitrate of Soda Industry, California...1,032
Nitrate of Soda Industry, Chile, Labor in 666
Nitrate of Soda Land Sales in Chile... 667
Nitrate of Soda Market.....Weekly
Nitrate of Soda Market in 1903..... 57
Nitrate of Soda Market, Chile..141, 221, 342, 502, 542, 626, 786, 905, 987. 1,066
Nitrate of Soda Production, Chile..58 182, 302, 542, 786, 866, 905, 986
Nitrate of Soda Profits and Prospects.. 905, 954
Nitrate of Soda Propaganda Expenses.. 666
Nitrate of Soda Stocks and Statistics in Europe.....58, 302, 342, 461, 666. 987
Nitrate of Soda Stocks and Statistics, U. S...58, 101, 263, 285, 422, 542, 585, 745, 786, 915, 945
Nitrate of Soda Supplies..... 58
Nitrate of Soda Trade, Chile..... 510
Nitric Acid, Mills' Pat..... 530
Nitric Acid, Pauling's Pat..... 773
Nitro Compounds, Reduction of, Buchner's Pat..... 933
Nitro Compounds, Making from Atmospheric Nitrogen, Mehner's Pat..... 489
Nitrogen, Producing, Kowalski & Moscicki's Pat..... 450
Nitrogen Organisms, Distributing, Moore's Pat..... 530
*Noakes' Pat. Separator..... 733
*Nome, Geology of..... 472
Nome, Mining.....76, 414
"Non-Metallic Minerals"..... 690
Norman's Pat. Flux Compound..... 973
Norris, R. V., Socorro Fan..... 676
"North American Geology, Paleontology, Petrology and Mineralogy"..... 650
North Carolina, Copper Mining..... 37
North Carolina, Garnets..... 634
North Carolina, Gold and Silver Production 5
North Carolina, Mining in Eastern..... 167
"North Carolina Mining Industry"..... 286
North Carolina, Nickel Mining..... 37
North Dakota, Coal Production..... 52
"North of England Institute of Mining and Mechanical Engineers, Index".. 729
"North Queensland Register" and J. H. Curle 69. 72
North Star Mines Co., Cal., Survey.... 507
North Wales, Zinc in..... 362
*Northern Belle Mine, Nev..... 150
Norton, Charles L., Protection of Steel from Corrosion..... 276
*Norton Coals of the Big Sandy Basin.. 235
Norway, Copper Production..... 794
Norway, Gold Production..... 6
Norway, Iron Ore Deposits of Varanger. 553
*Norway, Pyrite Smelting in.....757, 1,033
"Norway Statistical Year-Book"..... 246
Norwood, C. J., Kentucky Geological Survey 486
Notter's Pat. Conveyor..... 249
*Nova Scotia, Cheticamp..... 283
Nova Scotia, Coal.....52, 553
"Nova Scotia, Geological Maps of".... 126
Nova Scotia, Gold Mining..... 89
"Nova Scotia, Mineral and Crown Land Grants" 126, 406
"Nova Scotia Mines Report"..... 326
Nozzle for Impact Water-Wheels, Doble's Pat..... 290
Nueva Luz Mine, Mex..... 849
Nutting, W. H., Pyrite Smelting..... 391

O

Oakley's Pat. Metal Tongs..... 654
*Obalski, J., Note on Mineral Containing Radium in Quebec..... 441
Oberdahn's Pat. Brick Machine..... 170
O'Brien's Pat. Drill Chuck.....1,014
Ocampo District, Mex.....22, 515
Ocean Island, Phosphate Shipments... 102
Ocher Imports, New York..... 221
Ocher and Iron Ores, Recent Literature on Geology of..... 688
Ocher Production, Canada.....393, 800
Ocher Production, Great Britain..... 430
Ocher, Yellow, Deposits of the Cartersville District, Ga..... 688
Ochoa, Nicanor G., "Mineral Resources of Peru"..... 848
Oettli's Pat. Making Zinc Oxide.....1,014
Ohio, Coal Miners' Strike..... 823
Ohio, Coal Production..... 52
"Ohio Mines Report"..... 207
Oil, Borneo..... 604
Oil Bounty in Canada..... 977
Oil Briquette, New..... 567
"Oil, California, Chemical Analysis of" 809, 810
Oil, California, as Fuel for Steamers.. 678, 1,015
Oil and Coal in Central Asia..... 565
Oil vs. Coal as Fuel..... 56
Oil Coke..... 359
Oil Concentration of Ores. (See under Concentrating with Oil.)
Oil for Concentration of Ores..... 152
Oil, Condensing and Bleaching, Lewiak's Pat..... 250
Oil Consumption, California..... 56
Oil Deposits, Alaska..... 78
Oil, Discovery of, Essential to Possession of Claim..... 528
Oil Discovery, Texas..... 208
Oil, Distilling, Gathmann's Pat..... 573
Oil Duties in Canada.....491, 776
Oil Duties in Costa Rica..... 838
Oil Exports, Russia..... 644
Oil Exports, U. S.....454, 618
Oil Field, East Galicia..... 555
Oil Field, New, in Russia..... 445
Oil Field of Sakhalin..... 74
"Oil Fields of Alaska"..... 930
"Oil Fields of Russia"..... 729
*Oil Fuel, Science of Burning..... 771
Oil Furnaces, Talc Bricks for..... 480
Oil and Gas, Promoting Flow in Wells, Gardner's Pat.....1,014
Oil and Gas, Recent Literature on Geology of..... 930
Oil in Germany.....688, 969
Oil Industry of California..... 56
Oil Land, Cost of Developing, in California 56
Oil Land Leases in California..... 615
Oil Lands, Locating, in Canada..... 656
"Oil in Louisiana"..... 930
"Oil and Natural Gas, Occurrences and Exploitation in Ohio"..... 930
Oil, New Caledonia..... 204
Oil, Persia..... 441
Oil in Philippines..... 880
"Oil Production"..... 526
Oil Production, California.....656, 735
Oil Production, Canada.....24, 393, 648
Oil Production, Great Britain..... 430
Oil Production, Russia....309, 640, 674, 767
Oil Production, Texas..... 537
Oil Production, U. S..... 998
Oil Pump, Robinson's Pat..... 693
Oil Refining, Fleming's Pat..... 169
Oil Refining, O'Neill's Pat..... 490
Oil Reservoir, Englund's Pat..... 129
Oil for Roads in California..... 531
Oil Shale Production, Great Britain.... 430
Oil Smelting Furnace for Copper..... 615
Oil Stock Market, San Francisco....Weekly
Oil Strata, Deep, in Russia..... 770
Oil, Texas 327, 366
Oil Treatment, Pope's Pat..... 129
Oil Well Casings, Sinking, Beane's Pat. 813
Oil Well Fishing Tool, Sargent's Pat.. 210
Oil Wells, "Paying Quantities" Applies to Operating Expenses..... 168
Oil Well Swivel-Wrench, Barrett's Pat. 89
Oil Well Tool Support, Card's Pat..... 894
Oil Well Wall Packer, Smith & Wright's Pat. 529
Oil in Wyoming..... 929
Oklahoma, Columbite in..... 398
Oklahoma, Gold Mining Excitement.... 148
Oklahoma, Molybdenite in..... 398
*Old Abe Mine, N. M..... 800
*Old Dominion Copper Co. Works, Ariz. 839
*Old Dominion Fissure..... 802
Oliphant, F. H., "Natural Gas Production in 1902"..... 446
Oliphant, F. H., on Petroleum in the Philippines 880
Oliphant, F. H., "Petroleum Production" 526
Oliver & Bevan's Pat. Utilizing Waste Lime 210
"Olivet, S. D., Geologic Atlas"....366, 610
Olson's Pat. Transfer-Spout..... 614
Onda's Pat. Making Aluminum Sulphide and Aluminum Alloys..... 893
O'Neill's Pat. Refining Oil..... 490
O'Neil's Pat. Separating Hopper for Stamp Mill Launders..... 369
Ontario in 1903..... 23
Ontario, Arsenic Production..... 648
Ontario, Brick Production..... 648
Ontario, Building Stone Production..24, 648
Ontario, Calcium Carbide Production... 648
Ontario, Cement Production..... 648
Ontario, Copper Production.....23, 648
Ontario, Corundum Production..... 648
Ontario, Feldspar Production..... 648
Ontario, Gold and Silver Production.23, 648
Ontario, Graphite Production..... 648
Ontario, Gypsum Production..... 648
Ontario Iron Ranges, Exploration of.. 401, 775
Ontario, Iron and Steel Production..23, 48, 648
Ontario, Lead Production..... 648
Ontario, Lime Production..... 648
Ontario, Mica Production.....24, 648
Ontario, Mineral Production in 1903.... 648
Ontario, Molybdenite Production..... 648
Ontario, Natural Gas Production..... 648
Ontario, Nickel Production.....23, 648
Ontario, Oil Production.....24, 648
Ontario, Peat Fuel Production..... 648
Ontario, Pottery Production..... 648
Ontario, Pyrite Production.....24, 648
Ontario, Salt Production..... 648
Ontario, Talc Production..... 648
Ontario, Undeveloped Mineral Resources. 401
Ontario, Zinc Ore Production.....24, 648
Oosting's Pat. Brick Mold..... 894
Opal Discovery, Idaho..... 491
Opal Mining 469
Opal, New South Wales.....32, 978
Open-Hearth, Continuous Steel Patent.. 230
Open-Hearth Continuous Steel Process at Czenstocha 514
"Open-Hearth Steel Furnaces"..... 286
Open-Hearth Steel Furnace, Quambusch's Pat. 490
Option, Acceptance of, Makes Transaction Absolute Sale..... 892
Orange County Copper Deposits, Vermont 677
Orange Mineral Production, U. S..... 4, 5
Ore Agglutinizing, Uehling's Pat..... 369
Ore-Bins and Coal-Pockets, Design of.. 728
Ore Brick Koeniger's Pat..... 530
*Ore Car, Canclini's Pat..... 694
Ore Chute, Moffet & Keiser's Pat..... 369
Ore Crusher. (See under Crusher.)
"Ore Deposition and Circulation of Underground Aqueous Solutions"....809, 970
Ore Deposits, Differentiation of Igneous Magmas and the Formation of....71, 117, 157, 199, 237, 272, 312, 351, 472, 675, 756
Ore Deposition Theories, Historically Considered 117, 157, 199, 228, 237
*Ore Deposits of Alaska.....75, 472
Ore Deposits, Formation of Certain..... 964
Ore Deposits, Lake Superior, Survey of. 638
"Ore Deposits, Magnetic, Location and Examination of, by Magneto-metric Measurements" 126
Ore Deposits and the New Geology..... 312
Ore Deposits, Rich Portions of..... 636
Ore Deposits, Secondary Enrichment in Canada and Spain..... 70
Ore Deposits, Secondary Enrichment in New Mexico 153
*Ore Deposits, Virginius Mine..... 311
*Ore Dressing at Cananea.....1,044
Ore Dryer, Baume's Pat..... 934
Ore Grinder, Phipps's Pat..... 130
Ore Mill, Wild's Pat..... 329
Ore Picking Table, Netherton's Pat.... 974
Ore Pulp Distributing to Concentrating Tables, Carkeek's Pat..... 614
Ore Reserves, J. H. Curle on..... 72
Ore Reserves and Mine Equipment..468, 475, 512, 632, 636, 712, 715, 835, 995
*Ore Roasting Furnace. Edwards' Mechanical 242
*Ore Sampling Machine, Raht's Pat.... 250
Ore Scraper, Andrews' Pat..... 694
Ore Separator. (See under Separator.)
Ore in Sight Again..... 832
Ores, Classification and Separation of the Metallic Constituents of, Cattermole's Pat.....1,054
Ore Sizer and Concentrator, Phinney's Pat. 1,054
Ore Slimer, Monell's Pat.....1,054
Ores, Magmatic Segregation of..... 311
Ore Sorter, Baxter's Pat..... 934
Ore Treating Furnace, Beam's Pat..... 973
Ore Treating Furnace, Wilson's Pat.... 894
Ore Treatment, Alzugaray's Pat..... 330
Ore Treatment, Delprat's Pat..... 974
Ore Treatment, Fahrig's Pat..... 613
Ore Treatment, Greenwalt's Pat..... 933
Ore Treatment, Hannes' Pat..... 734
*Ore Treatment, Helm's Pat..... 574
Ore Treatment, Miller's Pat..... 250
Ore Treatment, Naef's Pat..... 613
*Ore Treatment, Potter's Pat..... 450
Ore Treatment, Rice's Pat..... 90
Ore Treatment, Smith's Pat..... 574
Ore, Wastage Allowance in Refining and Smelting 200
"Oregon" 970
Oregon, Coal Mining..... 728
Oregon, Cyanide Process in..... 35
Oregon, Gold Dredging..... 728
*Oregon, Gold Hill Dredge..... 525
Oregon, Gold and Silver Production.... 5
"Oregon Mineral Industry"..... 689
Oregon, Mining in..... 728
Oregon Pine for Heavy Construction...1,032
*Oriental Con. Mg. Co., Korea..... 554
Oriental Con. Mg. Co., Korea, Report.. 712, 730
Oroville, Cal., New Process for Working Black Sands and Base Ores at..... 491

*Oroyo-Brownhill Mine, Filter Presses. 603, 605
Orr's Pat. Separator 734
Orsman's Pat. Explosive 774
Orton, Edward, Jr., "Progress of the Ceramic Industry" 446
Osceola Con. Mg. Co., Mich., Cost of Producing Copper 428
Osceola Con. Mg. Co., Mich., Milling Practice 508
Osceola Con. Mg. Co., Mich., Report 447
Osgood, Samuel W., and Crown King Mines Co. 288
Osgood's Pat. Dredge 290
Osmiridium in British Columbia 230
Osmiridium Discovery, Tasmania 33
Osmium Lamps 682
Osmium, Use of 437
Otto's Pat. Steel Making 574
Ouray, Colo. 39
Overwinding, Accidents from 228, 231
*Overwinding, Hydraulic Apparatus to Prevent 518
Oviatt & Dean's Pat. Separator 249
Ownership of Personalty, Evidence as to 528
Oxalic Acid Imports, U. S. 57
Oxnam's Pat. Hardening Copper 90
Ozokerite Imports, New York 221
Ozokerite Industry, Galicia 398
Ozokerite Mines, Utah 418

P

Pacific Coast Borax Co. and Automobile Transportation 687
*Pack's Pat. Blast Furnace 450
*Packer's Pat. Miner's Candlestick 854
Packer's Pat. Tempering Molders' Sand. 1,014
Page's Pat. Excavating-Shovel 734
Pagett's Pat. Hydraulic Engine and Pump 329
Paint, Making, Armbruster & Morton's Pat. 289, 694
Paint, Making, Ramage's Pat 773
Paint Rock 248
Paint from Waste Arc-Lamp Carbons 557
Palagonite in California 634
Palladium 966
Palmer's Pat. Wood Distillation 450
Pan-American Mg. & Sm. Co., Mex., Flotation 912
"Pan-American Railway, Report on" 689
Paquet, Norbert, "Gold in Venezuela" 570
*Pardee Slate Picker 218
Parfitt's Pat. Steel Making 170
Paris Stock Quotations Weekly
"Park City District, Utah, Report on" 326
Parker, Edward W., Coal in Mexico 190
Parker, Edward W., "Coal Production in 1902" 446
Parker, Edward W., Gas, Coke, Tar and Ammonia Products in 1902 394
*Parker, E. W., Some Coal Exhibits at St. Louis World's Fair 559
Parker, Richard A., Bureau of Mining 272
"Parker, S. D., Geologic Atlas" 366, 610
Parker's Pat. Making Iron Oxide 974
Parker's Pat. Treating Niter Cake 490
Park's Pat. Cement Mold 409
Parks, W. A., on Stratigraphical Geology 401
Parnischowitz Borehole, Silesia 714
Parons Turbine Air-Compressor 359
Parral, Mexico, Mining in 21
Parrish, S. F., as Manager of Le Roi Mine 951
Parsons, A. L., "Recent Developments in Gypsum Industry of New York" 610
Parsons, H. deB., "Steam Boilers" 166, 930
*Partridge's Pat. Hearth for Smelting Furnaces 654
Partridge's Pat. Smelting Furnace 654
Partz, J. L., Pyrite-Fuel Smelting 471
Passow's Pat. Slag Cement 330
Patent Law, New, in Australia 114
Patenting Public Lands Containing Minerals 652
Patents, Great Britain in 1903 206
Patents, Great Britain Weekly
Paterson's Pat. Manufacturing Sheet Metal 330
*Patio Process in Mexico 601
"Patoka Folio, Indiana-Illinois" 650, 890
"Pattern-Making, Art of" 486
Patterson & Acklin's Pat. Ladle-Tilting Device 9, 933, 934
Patterson & Darrah's Pat. Miner's Lamp 130
Patterson's Pat. Conveyor 169, 893
Patton's Pat. Well Drill Jar 250
Paul, James W., West Virginia Coal Mines 53, 764
Pauling's Pat. Making Nitric Acid 773
Pauling's Pat. Treating Gases 773
Paving Brick, Pierce's Pat 614
Pavloff, M. A., "Open-Hearth Steel Furnaces" 286
*Paymaster Mine, Nev. 760
*Payne, C. Q., Magnetic Concentration of Zinc Ore in Virginia 1,001
Payne-Gillies Copper Process 362
*Payne Magnetic Separator 1,002
Payne's Pat. Magnetic Separator 1,014
Payne's Pat. Separating-Cylinder for Magnetic Separators 1,014
Peach's Pat. Excavator 529
Peake & English's Pat. Coal Cutting 529
Pearce, Richard, Losses in Vanning Tin Ores 116
Pearls and X-Rays 840
Peat Blocks, Kelland & Morrison's Pat. 573
Peat Building Blocks 880
Peat, Consolidating, Green & Martin's Pat. 329
"Peat, Facts About" 366, 930
Peat Fuel in Sweden 89, 641
Peat Harvesting Machine, Dobson's Pat. 773
*Peat and Lignite, Utilization of 562
Peat Production, Canada 393, 648
Peat Treatment, Milne's Pat. 574
Peat's Pat. Extracting Gold from Sea Water 370
Peck's Pat. Coal Chute 370
Peeler's Pat. Cement Blocks 1,054
*Pelton Colliery, Sirocco Fan at 608
Penafiel, Antonio, "Guanajuato Census" 650
Penafiel, Antonio, "Industrial Statistics of Mexico" 650
*Pennsylvania, Auchincloss Colliery 726
"Pennsylvania, Brownsville-Connellsville Geologic Atlas" 366
"Pennsylvania, Cambro-Silurian Limonite Ores" 485
*Pennsylvania Coal & Coke Plant at Gallitzin 398
Pennsylvania, Coal Miners' Wages 139, 377, 500, 1,063
Pennsylvania Coal Mines, Electricity at 873
Pennsylvania, Coal Mining Accidents 120
Pennsylvania, Coal Mining in the Pittsburg District 914
Pennsylvania, Coal Production 52
*Pennsylvania, Elk Lick Coal Mines 159
Pennsylvania, Hydro-Economic Investigations in 86
Pennsylvania Law on Blast Furnace Flue Dust Nuisance 508, 548, 573
*Pennsylvania, Packing Worked Coal Seams by Flushing 637
Pennsylvania Steel Co., Report 811
*Pennsylvania, Vesta No. 4 Colliery 1,039
Pepper, Charles M., "Report on Pan-American Railway" 689
Perkins, F. M., on Electrolytic Analysis of Gold 553
*Perkins, H. C., Gold Mining in Korea 554
Perkins's Pat. Wood Carbonizer 129
Peroxides, Manufacturing, Hinz's Pat. 853
Perry & Schanche's Pat. Drying Sulphate of Aluminum 90
Perry's Pat. Separator 853
Persia, Oil 441
Peru, Borax 461
Peru, Copper Production 794
Peru, Gold Production 6, 844
Peru, Guano Exports 381
"Peru, Mineral Resources" 848
Peru, Mining in 167, 810
Peru, Salpo Mining District 407
Peru, Saltpeter 461
Peters, Edward D. 791
Peters, Edward D., Review of Pyrite Smelting 881, 921, 959, 1,004, 1,043
Peterson's Pat. Roasting Furnace 130
Peters' Pat. Paint 557
Petroleum. (See under Oil.)
Petrology, Modern 514
Petsche's Pat. Blowing Engine Valve 774
Petzite 49
Pfanhauser, W., "Galvanoplastik" 770
Phalen, W. C., "New Occurrence of Unakaite" 650
Phalen, W. C., "Notes on Rocks of Nugsuaks Peninsula" 126
Philadelphia Iron and Steel Market in 1903 50
Philadelphia Iron and Steel Market Weekly
Philadelphia Pumping Station, Gas Engines for 150
Philadelphia Stock Quotations Weekly
Philippines, Coinage for 7, 382, 586, 746, 946
Philippines, Economic Geologist for 991
"Philippines, Gutta Percha and Rubber" 729
"Philippines, Plants" 729, 770
"Philippines, Biological Laboratory of" 890
Philippines, Conditions in 832, 849
Philippines, Oil in 880
Philippines and the United States Geological Survey 931, 1,051
Philip's Pat. Rolling Mill 169
Phillips, W. B., Lead Ore in Burnet County, Tex. 364, 1,011
Phillips, W. B., New Quicksilver Field in Brewster Co., Tex. 160
Phillips, W. B., "Report Texas University Mineral Survey" 446
Phillips, W. B., Texas Mineral Survey Field Work for 1904 877
Phillips, W. B., Texas Oils 327
Phinney's Pat. Ore Sizer 1,054
Phipps' Pat. Ore Grinder 130
Phthisis, Miners' 871, 915, 994
Phoenix Steel Co., Germany 792
Phosphate Deposits, South Australia 32, 395, 609
Phosphate Freight Rates in Florida 263
Phosphate Imports, Reporting 892
Phosphate Imports and Exports, U. S. 58, 285, 381, 542, 745, 946
Phosphate Imports, Great Britain 141, 502, 1,026
Phosphate Industry in 1903 58
Phosphate Industry, Algeria 461
Phosphate Industry, Florida 182, 381
Phosphate Market Weekly
Phosphate Order, Large American 262
Phosphate Production, Canada 393, 800
Phosphate Production, Florida 58, 182
Phosphate Production, South Carolina 58
Phosphate Production, Tennessee 58
Phosphate Production, U. S. 4, 5, 58
Phosphate Rock, New Method of Converting 326
"Phosphate Rocks of Arkansas" 610
Phosphate Shipments, Algeria 102, 221, 542, 569, 626, 946
Phosphate Shipments, Christmas Islands 102
Phosphate Shipments, Dutch West Indies 102
Phosphate Shipments, Florida 58, 102, 141, 182, 263, 461, 585, 667, 826, 905, 1,026, 1,066
Phosphate Shipments, Ocean Island 102
Phosphate Shipments, South Carolina 58, 1,066
Phosphate Shipments, Tennessee 58, 825, 585, 905, 1,066
Phosphate Shipments, Tunis 569, 667, 705, 946, 1,026
"Phosphates and Mineral Fertilizers" 446
Phosphate Trade, Algeria 569
Phosphate Trade, Florida 285
Phosphate Trade, Tennessee 325
Phosphate Trade, Tunis 569
Phosphoric Acid Consumption in Europe 502
Phosphoric Acid, Powter's Pat. 290
Phosphoric Acid, Purifying, Fallows' Pat. 734
Phosphorus 329
Phosphorus, Posternak's Pat. 490
"Photometry" 327
Pickett's Pat. Kiln 410
Pick, Hartshorn's Pat. 774
Pierce's Pat. Paving Brick 614
Pilley's Island Pyrite Production 969
Pinchot, Clifford, "Report of Forester for 1903" 126
Pipe Joints, Making 594
Pit Car, Hamill's Pat. 854
Pit Fires, Fighting 922
Pittsburg, Bessemer & Lake Erie Railroad, Cost of Transportation on 510
Pittsburg-Buffalo Coal Co. 54
Pittsburg Coal Co., Report 327
Pittsburg Coal and Coke Market Weekly
Pittsburg District Coal in 1903 53
Pittsburg District, Coal Mining 914
Pittsburg Iron and Steel Market in 1903 47
Pittsburg Iron and Steel Market Weekly
Pittsburg Iron Workers' Wages 101
Pittsburg Stock Quotations Weekly
Pixley & Abell's Statement Silver Shipments to the East Weekly
Placer Gold, Origin of, in California 771
Placer and Lode Claims, Locating, in Utah 1,015
Placer Mining in Alaska 76, 751
Placer Mining in Colombia 963
Placer Mining Law in Yukon 896
Placer Mining Machine, Turner's Pat. 814
Placer Mining in Siberia 917
Plague in South Africa 696
Plaster of Paris, Making, William Bros.' Pat. 694
Plate Handling Machine, Mills' Pat. 369
Platinum 248, 429, 591
Platinum, British Columbia 280
Platinum Discovery, French Guiana 458
*Platinum Dredging in the Ural Mountains 720, 762
Platinum Exports, Canada 394
Platinum Imports, U. S. 223, 383, 544, 747, 907
Platinum Industry, Russia 627, 720, 762
Platinum Market and Prices Weekly
Platinum, Melting Point at High Temperature 10
*Platinum, Occurrence of, in Ural Mountains 720, 762
Platinum Production, Russia 122
Plummer, John, Anthracite Coal in Australia 568
Podmore, Berry, Green & Inee's Pat. Hand Rock Drill 530
Poetter's Pat. Explosive 290
Poland, Zinc Production 308
"Polar Climate in Time, the Major Factor in the Evolution of Plants and Animals" 570
"Polar Planimeter and its Use in Engineering Calculations" 88, 287
Pollard's Pat. Face Mask 410
Pollution of Rivers by Coal Mine Refuse 217
Polonium 362
"Polytechnic Business College Journal" 294
Polte's Pat. Hollow Metal Articles 614
Ponsot, M. A., on Electrical Transport of Dissolved Salts 628
"Poor's Ready Reference Bond List" 485
Pope's Pat. Treating Oils 129
Popocatapetl and its Sulphur Deposits 674, 730
Porcelain, Melting Point at High Temperature 10
Porcupine District, Alaska 76
Porscke & Wedekind's Pat. Electrodes for Batteries 893
Portage Lake Ship Canal Traffic 234
Porter's Pat. Building Block 974
Porter's Pat. Mold for Concrete 974
Porter's Pat. Cyaniding Copper Ores 774
Portland Cement Manufacturers' Association, Object of 82
Portugal, Copper Production 794
Portugal, Gold Production 6
Postage, Question of 571
Posternak's Pat. Phosphorus 490
Potash, Bromide Production, Michigan 56
Potash, Carbonate Imports, New York 221
Potash Imports and Exports, U. S. 285
Potash, Permanganate Imports, New York 221
Potash, Prussiate Imports, New York 221
Potash Salts Industry, Germany 422, 508, 1,034
Potash Salts Production, Germany 798
Potter & Delprat Process for Treating Zinc Tailings 172
*Potter's Pat. Ore Treatment 450
Pottery Production, Canada 393, 648
Powder, Thawing 110
Power, F. Danvers, Eastern States of Australia 31
*Power, F. Danvers, Edwards' Mechanical Ore-Roasting Furnace 242
*Power, F. Danvers, Hancock Jig 806
Power, F. Danvers, New Caledonia 20
Power, F. Danvers, Payne-Gillies Copper Process 362
Power, F. Danvers, Prospectuses 1,047
Power, F. Danvers, Rich Portions of Veins 636
*Power Hammer and Rock Drill, Kraus's Pat. 169
Power Transmission Chains 641
Powter's Pat. Phosphoric Acid 290
Pratt, Joseph Hyde, "Mining Industry of North Carolina" 286
Prebble, W. C., on Electrolytic Analysis of Gold 553
Precious Stones, Imports, U. S. 204
Prescott's Pat. Alloy 734
Presidents, Engineers as 755
Prested's Pat. Miner's Electric Lamp 130
Price's Pat. Coke Quenching 933
Price's Pat. Electric Furnace 330, 694
Prices-Current Table Weekly
*Prichard, W. A., Filter-Pressing in Western Australia 602
Priming Composition, Bielefeldt's Pat. 289
"Primrose Mine, Rosebury, Report on" 526
Prince William Sound, Alaska 76
Prister, A., Determination of Gold in Cyanide Solutions 322
Professional Ethics, Question of 1,034
Professional Privilege 348
Professional Responsibility 673
*Proske, T. H., Rock Drill Bits 724
Prospector Again 229, 232
Prospector's Ore-Breaker, Calkins's Pat. 934
Prospector's Pan, Herndon's Pat. 894
Prospects, Logical Method of Valuing 552
Prospectuses 1,047
Public Lands, Acquired by Treaty, Containing Minerals May be Patented 652
Puddling Furnace, Jones's Pat. 614
Pughsley's Pat. Coupling for Mine Cars 774
Pulverizer, Benjamin's Pat. 854
*Pulverizer, Borton's Pat. 853
Pulverizer, Hughes' Pat. 653
Pulverizer, McAuley's Pat. 130
Pulverizer, Nickel's Pat. 893
Pulverizer, Schoellhorn & Albrecht's Pat. 90, 694, 894
Pulverizer, Taylor's Pat. 933
Pulverizer, Thame's Pat. 210, 653
Pulverizing Rolls, Davis' Pat. 1,014
Pumice Stone Combination in Lipari Islands 342, 745
Pumice Stone Industry, Russia 402
Pump Attachment, Kimball's Pat. 169
*Pump, Blake-Knowles High Speed 1,010
Pump, Bucket and Plunger 168
Pump, Centrifugal, Goth's Pat. 249
Pump, Elliott's Pat. 854
Pump, Krogh's Pat. 449
Pump, Rotary, Nielsen's Pat. 250
Pump, Rotary, Rein's Pat. 249
Pump, Smith's Pat. 369
Pump Valve, Choinere's Pat. 854
Pump, Wing's Pat. 774
Pumping Plant, Gas Engines for 150
Pumping Power, Weidler's Pat. 813
"Purdue University Catalogue" 809
*Purington, Chester W., Dredging for Platinum in the Ural Mountains 762
*Purington, Chester W., Occurrence of Platinum in Ural Mountains 720
Purser, Millar & Jenkins's Pat. Drill Sharpener 170
Pyrite, Alabama 422, 502
Pyrite Consumption, U. S. 125
Pyrite Exports, Canada 394
Pyrite Exports, Spain 161, 687, 840
Pyrite-Fuel Smelting 471
Pyrite Imports, Great Britain 705, 866, 1,026
Pyrite Imports and Exports, U. S. 5, 57, 125, 285, 381, 542, 745, 945
Pyrite, Iron, Preparing for Desulphurization, Wedge's Pat. 693
Pyrite Market Weekly
Pyrite Market in 1903 57
Pyrite Production, Canada 393, 648
Pyrite Production, Great Britain 430
Pyrite Production, Newfoundland 969
Pyrite Production, U. S. 4, 5, 57, 124
Pyrite Smelting 111, 188, 192, 231, 348, 351, 353, 391, 433, 471, 752, 792, 796, 832, 837, 875, 996, 1,035, 1,043
Pyrite Smelting in Arizona 575
Pyrite Smelting in British Columbia 193
Pyrite Smelting by Ducktown Sulphur, Copper & Iron Co. 837
Pyrite Smelting at Mt. Lyell, Tasmania 231
*Pyrite Smelting in Norway 757, 1,033
Pyrite Smelting at Ontario 996
Pyrite Smelting, Review of 881, 921, 959, 1,004, 1,043
Pyrite Smelting at Silverton, Colorado 193
Pyrite Smelting in South Dakota 353
Pyrite Smelting by Tennessee Copper Co. 231, 348
Pyrite Smelting in Utah 351, 391, 433
Pyrite Used in Colorado 247

Q

"Qualitative Analysis with the Blowpipe, Laboratory Guide" 167
Quambusch's Pat. Steel Furnace 490
"Quantitative Analysis for Mining Engineers" 446, 486
*Quarry Railroad 808
Quartier's Pat. Excavator 369
Quartz, Fused for Thermometers 634
Quartz, Ground 449
*Quartz Mill, Booker's Pat. 813, 814
*Quartz Mill, Elspass 640
Quebec, Asbestos Production 800
Quebec, Barium Sulphate Production 800
Quebec, Brick Production 800
Quebec, Cement Production 800
Quebec, Chrome Ore Production 800
Quebec, Copper Ore Production 800
Quebec, Feldspar Production 800
Quebec, Flagstone Production 800
Quebec, Gold Production 800
Quebec, Granite Production 800
Quebec, Iron Ore Production 800
Quebec, Lime Production 800
Quebec, Mica Production 800
Quebec, New Copper-Bearing Area in 483
Quebec, Ocher Production 800
Quebec, Pig Iron Production 800

*Quebec, Radium Minerals in..... 441
Quebec, Slate Production..... 800
Quebec, Stone Production..... 800
Queensland, Coal Discovery..... 172
Queensland, Coal Production..... 897
Queensland, Copper Production..... 897
Queensland, Gold Mining..... 617
Queensland, Gold Production..6, 31, 252, 372, 493, 533, 538, 657, 663, 822, 897, 978
Queensland, Lode-Tin Discovery..... 390
Queensland, Mining in 1903..... 31
Queensland, Mining Methods, J. H. Curle on 72. 73
Queensland, Tin Production..... 897
Quicksilver 994
Quicksilver Deposits, Texas.....147, 160
Quicksilver Exports, U. S..4, 223, 383, 544. 747, 907
Quicksilver Feeder for Stamp Mills, Carver's Pat. 1,054
Quicksilver Imports, Germany.....344, 868
Quicksilver Imports and Exports, Great Britain.....143, 344, 504, 707, 868, 1,028
Quicksilver Market and Prices.....Weekly
*Quicksilver Mining District, New, in Texas 685
Quicksilver Production, Austria..... 246
Quicksilver Production, Italy.....246, 361
Quicksilver Production, Spain..... 246
Quicksilver Production, U. S..... 4
Quicksilver Production in the World... 677
Quicksilver, Russia..... 285
Quicksilver, Turkey 682
Quincy Mining Co., Mich., Report..... 407
Quintaine's Pat. Obtaining Tin by Electrolysis 734

R

Rabble for Ore Roasting Furnaces, Johnson's Pat. 170
Rabezzana, A., "Cinnabar Furnace".... 485
Radio-Active Elements, New..... 362
*Radio-Active Minerals..... 887
Radio-Active Minerals, Analysis of..247. 887
Radio-Active Minerals, U. S. Geological Survey Collecting Data on..... 728
*Radio-Active Minerals, Electroscope... 887, 955
Radio-Active Minerals in Quebec...401, 441
"Radio-Activity" 848
Radium 168
Radium in Carnotite from Utah..... 234
Radium Chloride, Preparation of..... 161
Radium, Hunting for.....107, 149
Radium in Mineral Waters..... 761
Radium in Uranium Compounds..... 756
Radium in Zinc-Blende.....449, 571
*Raht's Pat. Ore Sampler..... 250
Rail Making, Record..... 594
*Railroad, Quarry 808
Rails, Comparative Quality of Basic and Bessemer Steel..... 872
Rails, Renewing, Lentz's Pat..... 409
Rails used in U. S..... 591
"Railway Statistics" 264, 689
Rain in California..... 531
Rain in Missouri..... 581
Rain in Transvaal..... 533
Ralli, Georges, Lead Mines of Balia, Turkey 274, 691
Ramage's Pat. Paint..... 773
Rand Mines, Ltd., Report..... 811
Rand Mines, Ltd., and Technical Education 751
Ransome, F. L., "Geology and Ore Deposits of the Bisbee Quadrangle, Arizona" 1,050
Ransome, F. L., "Geology of Globe Copper District, Ariz." 446, 525
*Ransome, F. L., on Faulting in the Globe District 802
Ransome, F. L., Recent Literature on Geology of Copper.....525, 729, 1,050
Ransome, F. L., Recent Literature on Geology of Nickel.....1,050
Ransome, F. L., Recent Literature on Geology of Gold and Silver..326, 649, 970
Ransome's Pat. Mixing Machine..... 934
Rare Elements, Prices of.....1,052
Rarig's Pat. Valve..... 370
Rathbone, Edgar P., vs. Etruscan Copper Estates Co..... 348
Rauscher's Pat. Mining Machine..... 329
*Raymond-Ely Mine, Nev..... 116
Raymond, R. W., Mineral Land Laws.. 958
Raymond, R. W., Modern Engineering.. 270
Raymond, R. W., Question of Professional Ethics 1,034
Raynaud's Pat. Making Sulphuric Anhydride 290
Read, Thos. T., Petroleum in Wyoming 929
Read, Thos. T., Pyrite Smelting at Bingham, Utah..... 351
Red Lead Production, U. S..... 4, 5
Redmayne, R. A. S., "Colliery Manager's Pocket-book" 207
"Redding Copper Deposits, Cal." 729
"Redding Quadrangle Mining and Mineral Resources, Cal."..... 729
Reducing Mill, Becht's Pat..... 693
Reducing and Separating Material, Craven's Pat. 329
Reed, Henry E., "Oregon"..... 970
Reed, Lyman C., "American Meter Practice" 446
Reeve's Pat. Combined Engine and Compressor 654
Reeve's Pat. Compressor Valve..... 529
"Reference Tables, Ready"..... 848
Reflectors in Mines.....528, 611
Regenerative Gas Furnace, Derval's Pat.1,014
Regenerative Gas Furnace, Siemens' Pat. 854
Re-Grinding Machines.....387, 403, 512, 635
Reichhelm's Pat. Annealing and Tempering Metal 1,014
Reim's Pat. Evaporating Alkaline Silicate Solutions 893
Rein's Pat. Rotary Pump..... 249
Reisert's Pat. Removal of Sulphuric Acid from Water..... 89
Reno's Pat. Tunnel Construction.....1,014
Repath, C. H., Improvement in McDougall Furnace 274
Research, Value of..... 874
Reserves, Secret 752, 761
Retort, Hague's Pat..... 853
Retort, Hirsh's Pat..... 974
Reuleaux's Pat. Gas Producer..... 734
Reverberatory Furnace Experiments at Anaconda 716
Reynolds' Pat. Blowing Engine..... 450
Reynolds' Pat. Crucible Furnace..... 774
Reynolds' Pat. Steel Melting..... 774
Rhode Island Copper Co., Mich., Report 407
Rhodesia Broken Hill Discovery..... 347
Rhodesia, Gold Production..6, 218, 741, 1,062
"Rhodesia Mines Report"..... 326
Rhodesia, Mining 391. 471
Rhodesia, Wankie Coal-Field..... 323
Rhodes' Pat. Grading Machine..... 169
Rice, Geo. S., Accidents by Overwinding 231
Rice's Pat. Ore Treatment..... 90
Richards, J. W., Advance of Electro-Chemistry 997
Richards, J. W., "Thermal Efficiency of Rotary Cement Kilns"..... 286
Richardson, C. S., Notes on Milling Practice 71
Richardson, F. B., "Brownsville-Connellsville Folio" 570
Richardson, F. B., "Masontown-Uniontown Folio" 570
*Richards' Pat. Stamp Mill..... 169
Richards, Robert H., Mining Education. 836
Rich's Pat. Slaking Lime..... 973
*Rickard, Forbes, Colorado Mining..... 38
Rickard, T. A., "Across the San Juan Mountains" 126
Rickard, T. A, Delegate to American Mining Congress..... 831
Rickard, T. A., Gold and Silver Production of the World..... 5, 6
Rickard, T. A., Greeting..... 1
Rickard, T. A., "Sampling and Estimation of Ore in a Mine"..... 690
Riddell's Pat. Separating Flue Dust from Gas 529
Riddlebaugh's Pat. Sorting Machine.... 450
Rider's Pat. Copper Ore Treatment.... 774
Rider's Pat. Dissolving Substances..... 89
Rider's Pat. Lead Ore Treatment..... 774
Ridgely, W. B., "Report of U. S. Comptroller of Currency"..... 207
Ridgway's Pat. Belt Conveyor.....1,054
Ridgway's Pat. Tripper for Conveyor-Belts 894
Ries, Heinrich, "Clays of U. S."...286, 326
Riley's Pat. Dredging and Sluicing.... 489
Rink's Pat. Electrolytic Decomposition of Alkali Chlorides..... 129
Rio Tinto Co., Spain, Report..... 611
*Rio Tinto, Copper Extraction at...644, 717
River Water Contamination by Coal Mine Refuse 188
Riveroll's Pat. Smelting Furnace..... 90
"Rivers, Improvement of"..... 287
Rizer, H. C., Scope of the United States Geological Survey 931
Roaster Lining, Hansen's Pat..... 694
Roasting Blende, Kunze & Danziger's Pat. 250
Roasting Furnace, Benker's Pat..... 210
Roasting Furnace, Craig, Kelly & Turner's Pat. 450
Roasting Furnace, Edwards' Pat..... 242
*Roasting Furnace, Falding's Pat..... 614
Roasting Furnace, Improvements in.... 274
Roasting Furnace Litigation.....549, 712
Roasting Furnace, Maddern's Pat..... 170
*Roasting Furnace, Meyer's Pat....249, 973
Roasting Furnace, Morton's Pat..... 814
Roasting Furnace, Peterson's Pat..... 130
Roasting Furnace, Smyth's Pat..... 894
Roasting Furnace, Wright's Pat..... 893
*Robbins, Frank, Repairing Steel Tape. 368
Roberts, D. C., Cobalt and Nickel in Kentucky 208
Roberts, F. C., Mining in Rhodesia.... 471
Roberts, G. E., "Production of Precious Metals in U. S."..... 848
Roberts, G. E., "Report of Director of the Mint" 848
Roberts, P., "Anthracite Coal Communities" 286
Robertson, W. F., "British Columbia Mines Report" 88
Robertson's Pat. Coaling Station..... 733
Robinette's Pat. Gunpowder..... 934
Robinson & Ball's Pat. Coal Mining Machine 90
*Robinson Fan at Somerville Mine..... 121
Robinson's Pat. Valve.....1,054
Robinson's Pat. Grinding Mill.....210, 249
Robinson's Pat. Oil Pump..... 693
Rochester & Pittsburg Coal & Iron Co., Adrian Furnace.....1,041
Rock Breaker, Bailey's Pat..... 369
Rock Breaker, Black's Pat.....1,053
Rock Breaker, Merralls' Pat..... 289
Rock Breaker, Wild's Pat..... 653
Rock Drill Attachment, Societe des Ateliers Burton's Pat.....1,014
Rock Drill Bit, Durkee's Pat..... 130
*Rock Drill Bits.....724, 758
Rock Drill, Box's Pat..... 128
Rock Drill, Brothers' Pat..... 369
Rock Drill, Christ &-Georg's Pat..... 614
Rock Drill Chuck, Hodge & Bartle's Pat. 370
*Rock Drill Chuck, Kimber's Pat..... 614
Rock Drill Exhaust, Duisburger Machinenbau Co.'s Pat..... 250
Rock Drill, Fauck's Pat..... 128
Rock Drill Holder, Nicholson's Pat.... 854
Rock Drill, Kuzel's Pat..... 370
Rock Drill, Maylan's Pat..... 330
Rock Drill, Podmore, Bery, Green & Inee's Pat..... 530
Rock Drill Regulator, Wagner Palmros Co.'s Pat..... 170
Rock Drill, Stephens' Pat..... 574
*Rock Drill Tests on the Rand.....768, 840
Rock Drilling Engine, Durkee's Pat.... 933
Rock Segregations 837
Roll Adjusting Mechanism, Knecht's Pat. 249
Roll-Grinding, Ford & Allen's Pat..... 210
*Roll-Jaw Crusher 123, 245
Rolling Metal Plates, Maskrey's Pat... 290
Rolling Mill Conveyor, Scholtz's Pat.... 813
Rolling Mill, Edwards' Pat..... 894
Rolling Mill, Electrically Driven..... 518
Rolling Mill Feed Table, Huber's Pat.. 290
Rolling Mill, George's Pat..... 853
Rolling Mill, Lentz's Pat..... 409
Rolling Mill, Philip's Pat..... 169
Rolling Mill, Swindell's Pat..... 813
Rolling Mill, York's Pat..... 369
Rolls, Johnson's Pat..... 130
Romig's Pat. Charging Scale..... 774
Ronay's Pat. Drying and Annealing Stove 130
*Ronnan, Fred. P., Cheticamp, Cape Breton 283
Ronnan, F. P., Oil Concentration of Copper Ores 611
Rope Haulage Rollers..... 638
Ropp Furnace, Improvements in..... 274
Ropp Furnace Litigation.....549, 712
Rosenbluth's Pat. Acetylene Gas Generator 410
Rosenthal's Pat. Converter Attachment. 814
Roskelley, I., Amalgamation on the Rand 841
Roskelley, I., on Cyanide in the Stamp-Mill 765
"Rossland Board of Trade Report".... 848
Rossland Ore Deposits, B. C..... 400
*Rossman's Pat. Amalgmator and Concentrator 170
Rouse & Cohn's Pat. Iron Ore Briquettes 774, 1,054
Rousseau's Pat. Melting Furnace..... 130
Rowand Magnetic Separator for Recovering Diamonds 996
Rowe's Pat. Separating Screen..... 90
Rowland's Pat. Welding Machine..... 813
Rowley's Pat. Compound Metal Ingot.. 734
Royal School of Mines..... 108
Royalty, Liability on Mining Lease..... 733
Royalty Payable on Ore Mined not Due When There is no Ore..... 693
Royer's Pat. Mine-Drill..... 934
Royle's Pat. Tube Making..... 250
Rubble Concrete for Thin Walls..... 558
Rubies in Burma..... 914
Rubitschung's Pat. Artificial Asphalt Stone 89
Ruby, Imitation of..... 914
Rudd, Arthur H., Breaking Up Furnace Sows 955
Ruddy, C. A., "Coal Deposits of Washington" 445
*Rudefeha Mine, Wyo..... 122
*Ruedy's Pat. Concentrator..... 654
Rueger, Chas. E., Method for the Direct Determination of Alumina..... 357
Rueger, Chas. E., Some Sources of Error in Estimation of Lime..... 688
Ruschhaupt's Pat. Making Slates..... 973
Rusden's Pat. Miner's Candlestick..... 370
Rush, U. S., Prospector Has Not Disappeared 233
*Russell's Pat. Concentrator and Amalgamator 210
Russia, American Mining Machinery in. 514
Russia, Bank Statement.....Weekly
Russia, Chemical Industry..... 479
Russia, Coal.....51, 84, 1,004
Russia, Copper.....322, 794
Russia, Deep Oil Strata in..... 770
Russia, Donetz Coal Basin..... 688
"Russia, Finance Report"..... 207
Russia, Gold and Silver Production....6, 108
Russia, Iron Mining.....518, 994, 1,010
Russia, Iron Ore in Germany..... 845
Russia, Manganese Ore Production..... 309
Russia, New Oil Field in..... 445
Russia, Oil Exports..... 644
"Russia, Oil-Fields" 729
Russia, Oil Production....309, 640, 674, 767
*Russia, Platinum Dredging..... 762
*Russia, Platinum, Occurrence of, in Ural Mountains 720
Russia, Platinum Production..... 122
Russia, Pumice Stone Industry..... 402
Russia, Quicksilver..... 285
Russia, Sludge Acid Utilization..... 550
Russia, Southeastern, Free Gold in Basic Igneous Rocks 522
Russia, Sulphuric Acid in..... 354
Russia, Zinc Tariff..... 127
Rutherford, E., "Radio-Activity"..... 848
Rutherford & Thompson's Pat. Mine Car Coupling 854
Rutherford, Ernest, Age of the Earth..1,038
Rutile, Duty on..... 329
Rutile Production, Virginia..... 37

S

Saam's Pat. Governor for Air Compressors 410
Sachse's Pat. Gold Saving..... 170
*Sackett's Pat. Crusher..... 734
Saddle-Reefs 509
Safety Brake for Hoisting Engines, Jones's Pat..... 130
Sahlin's Pat. Gas Fired Boiler..... 449
"St. Clair River Delta"..... 327
St. Eugene Mine, B. C., Description of. 951, 966
St. Joseph Lead Co., Operations..... 280
*St. Louis Exposition, Air Compressors for 164
*St. Louis Exposition, Coal Exhibits.... 559
St. Louis Exposition, Freiberg Exhibit.. 3
St. Louis Exposition, Mining Engineers at 641, 724
St. Louis Exposition, Opening..... 711
St. Louis Lead Market.....Weekly
St. Louis, Smoke Prevention in..... 963
St. Louis Spelter Market.....Weekly
St. Louis Stock Quotations.....Weekly
"St. Michel, Map of"..... 610
Sakhalin Oil-Field..... 74
Salisbury, R. D., "Geologic Processes and Their Results".....1,050
Salom's Pat. Sulphuric Acid..... 529
Salpo Mining District, Peru..... 407
Salt 469
Salt Bore-Hole, Deep..... 562
Salt Briquettes 485
Salt-Cake Process for Mixed Sulphides. 122
Salt Combination in Germany..... 585
Salt Competition on Pacific Coast..... 301
Salt Creek Oil-Field, Wyo..... 929
"Salt Deposits of California"..... 406
Salt Deposits, Locating..... 369
Salt Deposits in Mexico.....133, 576
Salt Deposits on the Tees..... 874
Salt, Dissolved, Electrical Transport of. 638
Salt, Early Manufacture in U. S.....1,034
Salt Exports, Great Britain...141, 502, 1,026
Salt Exports, Spain.....161, 687, 840
Salt Exports, Turk's Island..... 794
Salt Extraction by Evaporation..... 509
"Salt and Gypsum Deposits of Southwestern Virginia"..... 406
Salt Imports and Exports, U. S..285, 381, 542, 745, 945
Salt Industry, Utah.....594, 994
Salt Lake City Mining Stock Market.Weekly
Salt Mine Gas for Lighting the Workings 550
Salt Mines, Fire-Damp Explosions in... 714
Salt Mines, Ventilating..... 509
Salt in New York..... 914
Salt Production, Canada.....393, 648
Salt Production, Great Britain..... 430
Salt Raker, Johnson's Pat.....1,053
Salt in the Sahara..... 525
Saltar's Pat. Gas-Retort Charger..... 574
Saltpeter 794, 972
Saltpeter Consumption, U. S...58, 263, 285, 422, 542, 626, 945
Saltpeter Deposits, Cape Colony..... 342
Saltpeter Imports and Exports, Great Britain 141, 502
Saltpeter Market in 1903..... 58
Saltpeter, Origin of..... 754
Saltpeter, Peru 461
Salvador, Gold Mining.....1,048
*Sampler, Allen's Pat..... 490
Sampling Chalcocite and Cerargyrite... 872
"Sampling and Estimation of Ore in a Mine" 690
Sampling at Le Roi Mine, B. C..... 992
Sampling a Mine.....151, 271, 631
Sampling. When Impossible Examine Characteristics of a Mine..... 873
Sampling, When it Fails..... 593
Sand Cleaning, Vanzant's Pat.....1,014
Sanderson, J. Gardner, Utilization of Anthracite Culm for Producer Gas... 563
Sanderson's Pat. Gas Producer..... 573
*Sanders, W. E., Framing of Rectangular Shaft Sets..... 396
Sand Exports, Canada..... 393
"Sandfly Coal Mines, Tasmania"..... 88
Sand-Lime Brick..... 368
Sand, Moulding, Production, Canada.... 393
Sand Production, Great Britain..... 430
Sand Pump, Irvine's Pat..... 170
Sand, Quality Required for Cement Mortar 968
*Sand Wheel Used in Transvaal..... 481
Sands, Cyanidaton of.....272, 392, 597
Sandstone Production, Great Britain... 430
Sandycroft Foundry Co.'s Pat. Stamp Mill Tappet 90
Sanford, Samuel, Coal in 1903..... 51
San Francisco, Asphalt Streets in..... 895
San Francisco, Coal and Coke Imports. 100
San Francisco Coal Market.....Weekly
San Francisco, Gold Imports..... 867
San Francisco Mining Stock Market..Weekly
San Francisco Mint Coinage....451, 531, 775
San Francisco, Pig Iron Imports..... 100
"San Juan Mountains, Across"..... 126
San Luis Potosi, Mex. Mining Stock Market .....Weekly
*San Pedro, Los Angeles & Salt Lake Railroad 115, 155, 201
Santa Rita District, Secondary Enrichment of 153
Santa Fe Mine, Mex., Geology of..... 364
San Valentino Asphalt Deposits, Italy.. 607
Sargent's Pat. Oil Well Fishing Tool... 210
Saskatchewan, Gold on..... 127
Sault Ste. Marie Canal Traffic..... 838
Saunders' Pat. Well Drilling Machine.. 409
Sauveur's Pat. Detecting Temperature of Metals 89
Savelsberg's Pat. Desulphurizing Lead Ores 530
*Saxony, Nickel Deposits of Sohland... 363
"Saxony, Year-Book of Mining and Metallurgy" 930
Sayous, Andre E., "Trusts"..... 809
Scale, Charging, Romig's Pat..... 774
Scanlon's Pat. Excavator.....1,013
Schmeckebier, L. F., "Catalogue and Index of Hayden, King, Powell and Wheeler Surveys"..... 650
*Schmieder's Pat. Zinc Furnace..... 653
Schmitz's Pat. Separator..... 369
Schnatterbeck, Charles C., American Chemical and Allied Mineral Trades in 1903 57
Schnatterbeck, Charles C., New York Mining Stock Market in 1903..... 58

Schnatterbeck, Charles C., Dividends and Assessments in 1903..... 63
Schneider's Pat. Electric Furnace.894, 1,054
Schoellhorn & Albrecht's Pat. Pulverizer 90, 694, 894
Schoenfeldt's Pat. Concentrator..... 129
Scholtz's Pat. Conveyer for Rolling Mills 813
Scholz's Pat. Lead Pigments..... 170
Schorr, Robert, Binders for Coal Briquettes 563
Schorr, R., Profits in Manufacture of Fuel Briquettes 566
Schroeter's Pat. Coke Oven..... 973
Schukert & Co.'s Pat. Making Alloys.. 130
Schulte-Steinberg's Pat. Iron Ore Briquette 734
Schutz's Pat. Burning Fuel..... 250
Schuylkill No. 1 Coal Washery..... 807
Schwab, F. J., "Electrolytic Copper Refining" 485
Schwahn's Pat. Making Aluminum Sulphate 309
Schwarz's Pat. Artificial Stone..... 894
Schwarz's Pat. Electrolytic Refining of Metals 853
Schwartz's Pat. Smelting with Gas Fuel 530
Schwelzer's Pat. Kiln..... 249
Schwerin, C. M., Elimination of Impurities from Copper..... 755
Schwerin, Martin, Notes on Some Re-Grinding Machines 403
Science, Value of Research Work in.... 874
Scotch Iron Production..... 164
Scott, H. Kilburn, "Mica in Brazil".... 729
Scott. H. Kilburn, "Mineral Resources of Rio Grande do Sul"..... 207
Scott's Pat. Fluid-Pressure Regulator..1,014
*Scott's Pat. Retort Coke Oven..... 693
Scranton, Pa., Settling of Surface in... 277
Screen, Sturtevant's Pat..... 529
Screens, Mesh vs. Aperture..... 70
Searchlight, Nev..... 201
Sears, Mortimer A., Copper Extraction at Rio Tinto..... 717
Sears, Mortimer A., Training of Chemists 755
Seaver & Hulett's Pat. Dump Car Discharge 490
Sehillot's Pat. Treating Copper Ore.... 128
Secondary Enrichment of Ore Deposits in Ontario 70
Secondary Enrichment in the Santa Rita District, N. M..... 153
Sedgwick & Smith's Pat. Miner's Lamp 774
Seghill Colliery, Eng., Low Coal Consumption at 649
Seitz's Pat. Gas Engine..... 934
*Selby Sm. & Lead Co. Cast-Iron Turn-Table 195
Selenium 390
Separating Hopper for Stamp Mill Launders, O'Neil's Pat..... 369
Separating Metals from Ores, Turner's Pat. 814
Separating Metal Sheets, Grove's Pat.. 693
Separating Screen, Rowe's Pat..... 90
Separator, Adelsperger's Pat..... 170
Separator, Allen's Pat.....490, 1,053
Separator, Burroughs' Pat..... 329
Separator-Cylinder, Payne's Pat.....1,014
Separator, Emerson's Pat..... 129
Separator, Hopkins' Pat..... 290
Separator, Imlay's Pat..... 773
*Separator, Jahraus' Pat..... 210
Separator, Jessup's Pat.....1,013
Separator, Langerfeld's Pat..... 410
*Separator, Noakes' Pat..... 733
Separator, Orr's Pat..... 734
Separator, Oviatt & Dean's Pat..... 249
Separator, Shue's Pat..... 933
Separators, Pneumatic.....972, 1,052
Separator, Waggoner's Pat.....1,053
*Sergeant's Pat. Air Compressor..... 490
Servia, Gold Mining in.....1,034
Sessions & Norris' Pat. Mining Machine 894
Settle & Padfield's Pat. Coal Gas.....1,013
Seward, John, Careless Use of Technical Terms 915
*Seward Peninsula, Geological Section. 472
Seward Peninsula, Mining..... 76
Sewer Pipe Production, Canada..... 393
*Shaft, Concrete Lined..... 646
*Shaft, Repairing a Caved..... 889
*Shaft Sets, Rectangular, Framing of.. 396
*Shannon Smelter, Ariz..... 680
Shantung Coal-Fields..... 888
Sharpless, F. F., Laboratories for Advanced Instruction 551
Sharpless, F. F., Mine Sampling..... 271
Sharwood, W. J., Double Cyanides of Zinc With Potassium and With Sodium 845
Sharwood, W. J., Luminescent Zinc-Blende 1,000
Shaw's Pat. Dump Car..... 654
Shaw's Pat. Mine Car..... 654
Shedd, S., "Iron Ores of Washington".. 286
*Sheep Creek, Alsek District..... 767
Sheet Mill Adjusting Mechanism, Ely, Anderson & Slick's Pat..... 694
Shelton's Pat. Dump Car..... 450
Sheneman's Pat. Cement Furnace..... 574
*Shepard, Frank E., Horse Power for Ten-Stamp Battery 647
Sherman, Gerald F. G., Survey of North Star Mines..... 507
Sherman, P. L., "Gutta Percha and Rubber of the Philippine Islands".... 729
Sherwood's Pat. Dredge Anchor.....1,054
Shields's Pat. Treating Copper-Nickel Matte 1,054
Shier's Pat. Concentrator..... 734
Shipbuilding in U. S..... 114
Shoosmith's Pat. Discharging Vessels... 529
Shoveling Device, Westbrook's Pat..... 490
Shrader, Frank C., "Mineral Resources of Mt. Wrangel District"..... 649
Shue's Pat. Separator..... 933
Shupert's Pat. Fire-Brick..... 934
Siam, Gold Mining..... 203
Siberia, Coal..... 558
Siberia, Gold Dredges in..... 917
Siberian Railroad, Coal Consumption... 279
Sicily, Sulphur Exports...422, 523, 625, 986
Sicily, Sulphur Industry..... 523
Sicily, Sulphur Market..182, 301, 502, 625, 826, 986
"Siderology" 890
*Siemens-Ilgner System for Electric Mine Hoists 1,046
Siemens' Pat. Regenerative Gas Furnace 854
Signatures, Illegible 752
"Silesia, Mineral Statistics".....1,050
Silesian Spelter Market..183, 303, 463, 788
Silicate Stone 364
Silicious Segregations 837
Silicon, Action on Water..... 840
Silicon, Electrolytic Production of..... 991
Silicon in Metals, Solubility of.....1,037
Silicon Steel, Spencer's Pat.....1,054
Simonton's Pat. Coal and Coke Car.... 934
Silver. (See also under Gold.)
*Silverbell Camp, Arizona..... 639
*Silver City District, Idaho..... 885
"Silver City Folio, Idaho"..... 650
Silver Imports, China..... 325
Silver Imports, India..... 325
Silver Imports, Japan..... 325
Silver King—Daly-West—Daly Consolidation, Utah 147
Silver Market and Prices.....Weekly
*Silver Mines at Candelaria, Nev., Obituary Notice of..... 150
Silver Ore, Treating..... 248
*Silver Peak Region, Nevada.....759, 891
Silver Production, U. S..... 4
Silver Receipts, U. S. Assay Office...Weekly
Silver Shipments to the East..... 325
Silver Shipments from London to the East .....Weekly
*Simmons, Charles, Drillibite..... 244
Simpson's Pat. Purifying Iron..... 210
*Sirocco Fan 608, 676
Sites' Pat. Ingot Tongs..... 89
Sjostedt's Pat. Electric Furnace..... 1,054
*Skillin & Richards Mfg. Co., New Friction Clutch 206
Slag, Basic, for Fertilizing..... 834
Slag Car, Bennett & Jones' Pat..... 774
Slag Car, Mitchell's Pat..... 934
Slag Cement, Passow's Pat..... 330
*Slag Furnace, Baggaley & Garretson's Pat. 853
Slag for Paving Blocks..... 309
Slag Treatment, Massenez's Pat..... 974
Slate, Arkansas.....1,038 1,058
Slate, Artificial, South's Pat..... 249
Slate, California 95
Slate Making, Ruschhaupt's Pat..... 973
*Slate Pickers, Mechanical..... 317
Slate Production, Canada.....393, 800
Slate Production, Great Britain..... 430
Slate Production, Newfoundland..... 969
Slate, Treating and Cleaving, McLaughlin's Pat..... 90
Slate, Uses of..... 754
"Slav Invasion and the Mine Workers". 770, 1,051
*Slime Problem..... 435
*Slime Agitator, Trapezoidal..... 241
Slime Saving Apparatus, Smith's Pat.. 934
*Slime Table, New Sperry..... 484
Slime Treatment by Moore Process.... 33
*Slime Treatment in the Joplin Region. 683
*Slime Treatment in Western Australia 591, 602
Slocum's Pat. Clam-Shell Bucket..... 290
Slosson, E. E., "Laramie Cement Plaster" 610
Sloss-Sheffield Steel & Iron Co., Report. 772
Sluice Mining in California...367, 548, 575, 613
Smart, E., "Cyaniding Gold and Silver Ores" 771
Smelter Fumes, Arsenic from..... 276
*Smelter Stacks, Note on..... 203
*Smelters, Ancient near Guanajuato, Mex. 600
Smelting Complex Sulphides by Electricity 479
Smelting, Electric, General Electric Co.'s Pat..... 90
Smelting Furnace Experiments at Anaconda 716
*Smelting Furnace, Partridge's Pat.... 654
*Smelting Furnace for the Laboratory.. 479
Smelting Furnace, Riveroll's Pat..... 90
*Smelting Furnace, Trapp's Pat..... 169
Smelting with Gas Fuel, Schwartz's Pat. 530
Smelting & Refining Co. of Australia, Report 932
Smelting Sulphide Ores. (See under Pyrite Smelting.)
Smith, A. F., "Geology of Hiller County, Mo" 689. 770, 810
*Smith, A. M., Geology of the Kolar Gold-Field 238
*Smith, E. P., Notes on a Trip to White Oaks, N. M..... 799
Smith, H. L., and P. S., Copper Deposits of Orange County, Vermont... 677
*Smith, J. P., Gold Saving on Dredges. 198
Smith's Pat. Latch for Mine Car Doors. 330
Smith's Pat. Lubricant..... 89
Smith's Pat. Ore Treatment..... 574
Smith's Pat. Pumping Apparatus..... 369
Smith's Pat. Slime Saving..... 934
Smith & Wright's Pat. Wall Packer for Oil Wells 529
Smith, W. S. T., "Iron Ores of the Hartville District, Wyo."..... 485
Smoke Prevention in St. Louis..... 963
Smyth & Bowers' Pat. Dredge..... 128
Smyth's Pat. Roasting Furnace..... 894
Snider's Pat. Excavator..... 814
*Snowshoe Mine, B. C..... 163
Snowshoe-British Columbia Copper Co., Consolidation 162
Snyder, F. T., on Magnetic Separation.. 401
Snyder's Pat. Coke Drawer's Lamp.... 410
Snyder's Pat. Excavator..... 814
Snyder's Pat. Separator..... 490
Societa Romana Solfati's Pat. Producing Pure Alumina 370
Societe des Accumulateures Chelin's Pat. Electric Lamp for Mines..... 614
Societe des Ateliers Burton's Pat. Rock Drill Attachment.....1,014
Societe Electro-Metallurgique Francaise's Pat. Electric Refining of Iron..... 330
Societe Oettli's Pat. Manufacturing White Lead 974
Society for the Promotion of Engineering Education, "Proceedings"..... 207
Soda Crystals, Adulterated..... 292
Soda Deposits, East Africa..... 342
Soda Exports, New York.....181, 705. 905
Soda, Hyposulphite, Making, Badische Anilin & Soda Fabrik's Pat..... 90
Soda, Hyposulphite Production, New York 221
Soda Imports and Exports, U. S..... 285
Soda, Nitrite Imports, New York..... 221
Soda, Separation by Electrolysis, Ashcroft's Pat..... 130
Soda, Sulphide Making, White's Pat.. 529
Sodium Cyanide 892
Sodium-Magnesium Sulphate..... 408
*Somerset Coal Co.'s Elk Lick Mines.. 159
*Somerville Mines of Beech Creek Coal & Coke Co..... 120
Sooysmith's Pat. Tunneling..... 574
Sorenson's Pat. Hardening Aluminum... 170
Sorting Machine, Riddlebaugh's Pat.... 450
Soudan, Gold Production..... 6
Southern Iron Consolidation, Proposed.. 220, 300, 704, 898
South Africa in 1903..... 26
South Africa, Beginning of Prospecting for Minerals in..... 714
South Africa, Coal..... 323
South Africa, Copper..... 812
South Africa, Cyanide Trade..... 199
South Africa, Garnets..... 634
South Africa, Gold Production..6, 26, 178, 338, 498, 701, 818, 863, 1,042
South Africa, Labor in..26, 27, 94, 133. 252
"South Africa, Map"..... 246
South Africa, Miners' Candles for..... 156
South Africa, Mining Dividends..... 28
South Africa, Plague in..... 696
South Africa, Progress in..... 308
South Africa, Steel Cyanide Tanks for. 164
South African Association for the Advancement of Science.....793, 818
South African Chemical, Metallurgical and Mining Society Use of the Word "Mesh" 792
South America, Copper Production..... 8
South America, Mining Dividends..... 63
"South Australia, Agricultural and Live Stock Statistics" 366
South Australia, Gold Mining..... 22
"South Australia, History, Progress and Resources" 610
"South Australia, Mining in 1902".... 689
"South Australia, Occupations of the People" 366
South Australia, Phosphates....32, 395, 609
"South Australia Statistical Record, 1902" 446
*South Australian Mines in 1903..... 920
South Carolina, Gold and Silver Production. 5
South Carolina, Phosphate Shipments.58, 1,066
South Carolina, Tin Deposits..... 538
*South Dakota in 1903..... 45
South Dakota, Cyanide Process.....33, 35
"South Dakota, Geologic Atlases of".. 126, 366
*South Dakota, Geological Position of Black Hills Ores..... 45
South Dakota, Gold and Silver Production 5
South Dakota, Pyrite Smelting in..... 353
South, Gold and Copper Mines of..... 37
Southern Iron Consolidation, Proposed.. 267
Southern's Pat. Melting Furnace..... 893
South's Pat. Artificial Slate..... 249
*Southwest, Mining in..... 35
Spain, Aerial Tramway in..... 678
Spain, Arsenic..... 965
Spain, Bank Statement.....Weekly
Spain, Coal and Coke Imports and Exports 161, 583, 687, 840
Spain, Coal and Coke Production..... 584
Spain, Copper Exports.....161, 687, 840
*Spain, Copper Extraction at Rio Tinto. 644
Spain, Copper Production.....8, 794
Spain, Gold Production..... 6
Spain, Iron Exports.....161, 687, 840
Spain, Iron Ore Market.....Weekly
Spain, Iron and Steel Production..... 598
Spain, Lead Exports.....161, 687, 840
Spain, Lead Market.....Weekly
Spain, Manganese Exports..... 241
"Spain, Mineral Statistics"..... 126
Spain, Mining Engineers in..... 911
"Spain, Mining Laws of".....1,050
"Spain, Mining, Metallurgy and Electricity in" 526
Spain, Pyrite Exports.....161, 687, 840
Spain, Quicksilver Production..... 246
Spain, Salt Exports.....161, 687, 840
Spain, Zinc Exports.....161, 687, 840
Spain, Zinc Ore Market.....Weekly
Spain, Zinc Production..... 208
Spelter. (See under Zinc.)
Spencer, A. C., "Encampment Copper Region, Wyo." 525
Spencer, A. C., "Juneau Gold Belt, Alaska" 970
Spencer's Pat. Coal Separator..... 409
Spence's Pat. Aluminum Sulphate..... 490
Spence's Pat. Titanous Compound..... 773
Spencer's Pat. Silicon Steel.....1,054
*Sperry Slime Table..... 484
Spicer, Jas., Texas Oil.....208, 366
Spilsbury, E. G., Mine Equipment and Ore Reserves..... 512
Spray Pump, Herbert & Kirkup's Pat.. 574
Spurlock's Pat. Wood Distillation..... 290
Spurr, J. E., Native Gold Original in Metamorphic Gneisses 198
Spurr, J. E., Nevada Mining..... 44
Spurr, J. E., Original Source of the Lake Superior Iron Ores..... 286
*Spurr, J. E., Silver Peak Region, Nevada 759
Staff 317
Staley's Pat. Cement-Brick Machine.... 974
Stamp Battery Foundations.....877, 1,036
*Stamp Battery Guide, McDonough's Pat. 530
*Stamp, Krause Atmospheric..... 769
Stamp Mill, Anderson's Pat..... 934
Stamp Mill Attachment, Tulloch's Pat.. 128
*Stamp Mill, Boss' Pat..... 614
*Stamp Mill, Cantilever Battery Frame Construction 404
Stamp Mill, Cyanide in..... 765
Stamp Mill, Merralls' Pat.....370, 410, 653
*Stamp Mill, Montgomery's Pat..... 853
*Stamp Mill Mortar on Brazilian Coast. 71
*Stamp Mill, Richards' Pat..... 169
Stamp Mill Tappet, Brown's Pat.....1,054
Stamp Mill Tappet, Sandycroft Foundry Co.'s Pat. 90
*Stamp Mill, Ten, Horse Power for.... 647
Stamping Machine for Plaster Clay, Hoelsche's Pat. 449
Standard Exploration Co. Litigation.... 547
Stanley River Tin District, Tasmania.. 920
*Star vs. Byron N. White Mining Co., B. C..... 758
Stead's Pat. Leaching Apparatus..... 773
"Steam Boilers".....166, 930
"Steam Carriages and Traction Engines, English and American"..... 770
Steam, Economy in Use of..... 429
Steam Hammer, Billin's Pat..... 489
Steam Shovel, King, Barnhart & King's Pat. 893, 1,053
*Steam Shovel, New Kilgore..... 205
Stearns's Pat. Coaling Boats..... 894
Steel. (See also under Iron.)
Steel Alloy, Tresidder's Pat..... 530
Steel, Annealing, Davis' Pat..... 573
Steel, Basic, Making, Bessemer Converter in 399
Steel, Bessemer, Production U. S...591, 598
Steel, Case-Hardening, Lemargese's Pat. 410
Steel Castings, Matzek's Pat..... 734
Steel Columns for Mill-Building Construction 350
Steel Concrete Construction, Metcalf's Pat. 410
Steel Conference, International.....671, 832
Steel, Continuous Open-Hearth Furnace at Czenstocha 514
Steel, Continuous Open-Hearth Patent.. 230
Steel, Crushed, Production, U. S. 4, 5
Steel Cyanide Tanks for South Africa.. 164
Steel, Determination of Tungsten in.... 362
*Steel Furnace, Electric, at Gysinge, Sweden 967
"Steel Furnace, Open Hearth"..... 286
Steel Furnace, Open-Hearth, in Great Britain 398
Steel Furnace, Open-Hearth, Quambusch's Pat. 490
Steel, Hardening, Hadfield's Pat..... 450
Steel Imports, Mexican Tariff on..... 212
Steel and Ingot-Iron Making, Talbot's Pat. 129
Steel Ingots, New Method for Increasing Density of 354
Steel Making, Alzugaray's Pat..... 250
Steel Making, Burrow's Pat..... 694
Steel Making, Engels' Pat.....330, 654
Steel Making, Lash's Pat..... 530
Steel, Making, Massenez's Pat..... 450
Steel Making, Otto's Pat..... 574
Steel Making, Parfitt's Pat..... 170
Steel Making, Young's Pat..... 330
Steel Melting, Reynolds' Pat..... 774
"Steel, Metallurgy of".....446, 571
Steel Plates for Ball-Mills, Duty on....1,013
Steel, Protection from Corrosion..... 276
Steel, Purifying, Keller's Pat..... 250
Steel Rail Making, Record..... 594
Steel Rail Production, U. S..... 785
Steel Rails for Canada..... 227
Steel Rails, Comparative Quality of Basic and Bessemer..... 872
Steel Rails, Deadlock on Prices..... 148
Steel Rails, for New Zealand..... 744
Steel, Self-Hardening and High Speed..1,057
Steel, Styrian 927
*Steel Tape, Repairing.....248, 368
Steel; Tungsten 556
Steel Vessels on the Great Lakes..... 242
Steele's Pat. Explosive.....1,013
Steger's Pat. Artificial Stone..... 614
*Stein, Ernest, Home-Made Boiler Feed Water Heater 1,009
Stephens's Pat. Rock Drill..... 574
Sterling Exchange .....Weekly
Stevens, Blamey, Acidic Magmas: Their Exhalations and Residues..... 351
Stevens, Blamey, Logical Method of neous Magmas and the Formation of Ores 72
Valuing Prospects..... 552
Stevens, Blamey, Differentiation of Ig-
Stevens, Blamey, Magmatic Segregation of Ores 311
Stevens, Blamey, Silicious Segregations 837
Stevens & Timmerman's Pat. Electric Furnace 130, 734
Stevenson, Graham M., on Electricity or Steam for Hoisting..... 881
Stevenson, Robt., Deposition of Ores from an Igneous Magma.....273, 472, 756
Stevenson, Robt., Valuation of Gold Mines 915
Still for Crude Bituminous Material, Ash's Pat. 654
Still, Merrill's Pat..... 933
Stock Markets in 1903..... 58

Stock Sale, What Representations are Subject to Warranty in..... 528
Stockett, Lewis, Cleaning Bituminous Coal 557
Stone, Artificial, Chase's Pat..... 854
Stone, Artificial, Darrow & Wood's Pat. 249
Stone, Artificial, Dunn's Pat..... 489
Stone, Artificial, Jaques' Pat..... 128
Stone, Artificial, McClenahan's Pat..... 693
Stone, Artificial, Schwarz's Pat..... 894
Stone, Artificial, Steger's Pat..... 614
Stone, Artificial, Walther's Pat.....1,054
Stone Cleaning Composition, Braben's Pat. 489
Stone Dressing, Stoughton's Pat..... 129
Stone Production, Quebec..... 800
Stone, R. W., "Elders Ridge Coal Field" 848
Stone, Sawing, Davis' Pat..... 813
Stone Sawing Machine, Alston's Pat... 330
Stone Sawing Machine, Hunter's Pat... 409
Stone Sawing Machine, Thomson's Pat.. 130
Stoneham, W. J., Nevada Coal-Field....1,009
Stoneham, W. J., Silver Peak Region, Nev. 891
Stone Sweepings, Duty on..... 329
Stone's Pat. Core Drill..... 934
*Stone's Pat. Filtration of Gases..... 733
Stone's Pat. Tunneling..... 128
"Storage Battery Engineering"..... 366
Storage, Dodge's Pat..... 530
Storey's Pat. Concentrator..... 130
Stoughton's Pat. Stone Dressing Machine 129
Stove, Drying and Annealing, Ronay's Pat. 130
Stover, A. P., on Miner's Inch..... 834
*Stover Mine, Mo..... 564
Straits Settlements, Chinese in..... 230
Straits Settlements, Silver Dollar in... 7
Straits Settlements, Tin Mining..... 103
Straits Settlements, Tin Production..18, 503
Stratton Estate vs. Venture Corporation. 68, 92, 331
Stratton's Independence Mine Accident, Colo. 228
Stratton's Pat. Hoist..... 774
Stroh's Pat. Casting Machine.....573, 813
Strontium Carbonate 613
Struthers, Joseph, Aluminum in 1903... 20
Struthers, Joseph, Antimony in 1903.... 18
Struthers, Joseph, Bromine..... 56
Struthers, Joseph, Production of Minor Minerals in 1903.....74, 123
Strutt, R. J., Radium in Mineral Waters 761
Stucki's Pat. Door for Hopper Cars.... 330
Stucki's Pat. Mining Car.....330, 923
Stukes's Pat. Fan Blower..... 90
*Sturtevant New Hand-Blower..... 893
*Sturtevant Roll-Jaw Crusher.....123, 245
Sturtevant's Pat. Dressing Crushing Rolls 853
Sturtevant's Pat. Grinding Mill....813, 934
*Sturtevant's Pat. Mechanical Feeding Device 733
Sturtevant's Pat. Screen..... 529
Sturtevant's Pat. Turning Machine for Rolling Tires 811
Styrian Steel 927
Sucker Rod Cleaner, Carlin's Pat.....1,054
"Sudbury Nickel Deposits".....1,050
Sudbury Nickel Mines.....14, 73
Sudbury, Smelting at..... .....232, 352
Sullivans vs. Jones & Laughlin Steel Co. 573
Sulphide Anhydride Making, Raynaud's Pat. 290
Sulphide Corporation, Ltd., Report..... 971
Sulphide Ore Smelting. (See under Pyrite Smelting.)
Sulphide Ore Treatment, Delprat Process 122
Sulphide Ore, Leaching, Alzugaray's Pat. 210
Sulphides, Complex, Electric Smelting of 479
Sulpho-Telluride Ore Treatment....111, 351
Sulphur in 1903..... 57
Sulphur, Alaska 262
Sulphur from Anhydride..... 289
Sulphur Burner, Blumenberg's Pat..... 130
Sulphur Burning, Marsden's Pat..... 129
Sulphur, California..... 422
Sulphur Consumption, U. S..... 57
Sulphur Deposits, Popocatepetl.....674, 730
Sulphur, Determination in Coal and Coke 202
Sulphur Exports, Sicily...422, 594, 625. 986
Sulphur Imports, Great Britain.342, 502. 1.0
Sulphur Imports and Exports, U. S..5, 57, 285, 381, 542, 745, 945
Sulphur Industry, Louisiana.....826, 1,026
Sulphur Industry, Sicily..... 523
Sulphur Market .....Weekly
Sulphur Market in 1903.....* 57
Sulphur Market, Sicily..182, 301, 502, 625, 826, 986
Sulphur Production, Japan..... 309
Sulphur Production, U. S.....4, 5. 57
Sulphuric Acid, Cost of Making.....1,008
Sulphuric Acid Exports, Great Britain. 342, 1,026
Sulphuric Acid Making, Garroway's Pat. 490
Sulphuric Acid, Making, Hasenbach's Pat. 329
Sulphuric Acid Making, Heinz & Hegeler's Pat..... 369
Sulphuric Acid Making, Lunge's Pat.... 774
Sulphuric Acid Making, Salom's Pat... 529
Sulphuric Acid, Recent Improvements in the Manufacture of.....1,007
Sulphuric Acid Removal from Water, Reisert's Pat..... 89
Sulphuric Acid in Russia..... 354
Summons' Pat. Drill Holder..... 490
Sumpter Smelter, Oregon..... 728
Sunday Labor in Western Australia.... 509
Superphosphate Industry, U. S..... 342
Superphosphate Manufacture in Germany 326
Superphosphate Works, New, for Florida 745
Superstition in Mining..... 993
*Superstition in Mining in Korea.....1,005
"Suplee's Mechanical Engineer's Reference Book" 287
Surface Damages from Underground Workings 773
Surface, Right to Support, When Title to Minerals and Surface are Separated 1,053
Survey, Right to Make in Examination of Extralateral Rights..... 289
Surveying-Boundaries of Mining Claims. 892
Surveying Practice at Anthracite Mines 240
Suter, H. M., "Forest Fires in the Adirondacks in 1903"..... 729
Sutter County vs. Johnson, Cal..... 508
Suttle, T. R., "Miner's and Prospector's Pocket Guide" 1,050
Sutton's Pat. Kiln..... 894
Sweden, Copper Production..... 794
*Sweden, Electric Steel Furnace at Gysinge 967
Sweden, Falun Gold Mine..... 281
Sweden, Gold Production..... 6
Sweden, Iron Ore Exports.....123, 242
Sweden, Iron and Steel Production..... 798
Sweden, Large Iron Ore Deposit in..... 121
Sweden, Peat 89, 641
Swenson, Bernard Victor, "Testing Electro-Magnetic Machinery"..... 166
Swetland, Horace M..... 107
Swindell's Pat. Rolling Mill..... 813
Swingle, C. F., "Twentieth Century Handbook for Engineers and Electricians" 650
Sylvanite 437

T

Taber's Pat. Tuyeres..... 814
*Tabowie Camp and Mill, Korea..... 554
*Tailings Elevators 481, 597
Talbot, Benjamin, vs. Ambrose Monell.. 230
Talbot's Pat. Making Steel and Iron... 129
Talc 449
Talc Bricks for Oil Furnaces..... 480
Talc Imports, New York..... 221
Talc Mining, California..... 135
Talc Production, Canada.....393, 648
Talc, U. S. Tariff on..... 141
Tamarack Mining Co., Mich., Report... 612
Tangier-Smith, W. S., "Lead, Zinc and Fluorspar Deposits of Kentucky".... 366
*Tape, Steel, Repairing.....248, 368
Tappet for Stamp Mills, Kelly's Pat... 369
Tappet for Stamp Mills, Morey's Pat... 380
Tar Production, U. S..... 394
*Taracol Camp, Korea..... 555
"Tasmania Clay Deposits at St. George's Bay" 770
Tasmania, Copper Exports..... 172
"Tasmania, Dial Range"..... 526
Tasmania, Gold and Silver Exports.172, 978
"Tasmania Mineral Industry, Progress of" 526
Tasmania, Mining Law..... 32
Tasmania, Mineral Production..372, 657, 897
Tasmania, Osmiridium Discovery..... 33
"Tasmania, Report on Mineral Fields Between Wartah and Longplains".... 88
Tasmania, Stanley River Tin District.. 920
Tasmania, Tin.....150, 172
Tatters's Pat. Acetylene Gas Generator. 409
Taxing Mining Property, Difficulty of.. 508
*Taylor, F. Winter, Gold Dredging..82, 476
Taylor, Selwyn M.....149, 173
Taylor's Pat. Ingot Crane..... 490
Taylor's Pat. Pulverizer..... 933
Taylor's Pat. Preserving Wood..... 853
Taylor's Pat. Tongs..... 894
Tays, E. A. H., Gold in Gypsum..... 956
Technical Education.....596, 876, 916
Technical Societies Federation in Great Britain 431
Technical Terms, Use of..109, 915, 952, 996
Teichgraeber's Pat. Heating Air for Blast Furnaces 130
Telluride Reduction Co.'s Pat. Filter for Leaching Tanks.....1,054
Temperature in Deep Mining..... 714
Temperature and Moisture Regulator, Milne's Pat..... 574
Temperature of Flames..... 166
Temperature of Metals, Detecting, Sauveur's Pat..... 89
Tennessee Coal, Iron & Railroad Co., Report 872, 891
Tennessee Coal, Iron & Railroad Co. Steel Plant at Ensley, Ala..... 399
Tennessee, Coal Production..... 52
*Tennessee Copper Co. Copper Losses in Blast Furnace Slags..... 395
Tennessee Copper Co., Heap Roasting... 671
Tennessee Copper Co., Profits..... 348
Tennessee Copper Co., Pyrite Smelting. 231, 832
Tennessee Copper Co., Report.....309, 367
Tennessee, Gold and Silver Production.. 5
Tennessee Iron Shipments.....140, 824
Tennessee, Low Cost of Pyrite Smelting in 832, 837
"Tennessee Mines Report".....1,011
Tennessee, Phosphate Production..... 58
Tennessee, Phosphate Shipments.58, 325, 585, 905, 1,066
Tennessee, Phosphate Trade..... 325
Tennessee, Pyrite Smelting.....231, 832, 837
"Tennessee, Recent Zinc Mining in"... 770
Tennessee, Topography of the Mannie Quadrangle 74
Terra Cotta Production, Canada..... 393
Texas, Lead Ore in Burnet County.364, 1,011
Texas Mineral Survey, Field Work for 1904 877
*Texas, New Quicksilver Mining District in 685
Texas, Oil Discovery.....208, 327, 368
Texas, Oil Production..... 537
Texas, Quicksilver Deposits.....147, 160
Texas, Silver Production..... 5
*Texas, Topographic Map of..... 842
Texas University Mineral Survey..... 350
Thallium Market.....Weekly from May 19
Thane's Pat. Pulverizer.....210, 653
Thermit 20
*Thermometer-Thermostat, Bristol 889
Thesen, G., Pyrite Smelting in Norway.1,033
Thomas, B. F., "Improvement of Rivers" 287
Thomas Iron Co., Fiftieth Anniversary. 916
Thomas, R. Arthur, Prevention of Miners' Phthisis 994
Thomas's Pat. Artificial Fuel..... 574
*Thomas Slate Picker..... 318
Thompson, A. Beeby, "Oil-Fields of Russia" 729
Thompson's Pat. Mining Machine.....1,054
Thompson, S. P., "Dynamo-Electric Machinery" 770
Thompson, W., on Building Bulkheads in Nickel Plate Mine, B. C..... 400
Thompson, W., Note on the Construction of Mine Bulkheads..... 483
Thomson & Smith's Pat. Mine Cage Safety Grip 854
Thomson, J., "Let the Cobbler Stick to His Last" 981
Thomson's Pat. Producing Tubes from Refractory Material.....1,053
Thomson's Pat. Stone Sawing Machine. 130
Thorium 449, 914
Thorium Oxide, Phosphorescent..... 203
Thorne, W. E., Origin of Placer Gold in California 771
Thornley's Pat. Mine Car Lubricator.... 814
"Tichomingo, Ind. Ter., Geologic Atlas" 306
Tichon's Pat. Brazing Compound..... 574
*Tien-Pau-Shan, Ruins of Chemical Laboratory at..... 434
Tierra del Fuego Gold-Fields..... 429
Tiffany's Pat. Concrete Block Mold..... 973
Tilt Cove Copper Production, Newfoundland 969
Timber for Butte Mines..... 41
*Timbering in Witwatersrand Mines.... 719
Timber for Mines, Preserving..... 732
Timbers, Decay of Mine..... 892
Timbers, Rotten, Cause of Explosion of Fire-Damp 390
Timmins & Englerest's Pat. Drill Point. 814
Tin in 1903..... 18
Tin, Assay of.....911, 928, 957
Tin, Bolivia 354
Tin Deposits, South Carolina..... 538
Tin, Dressing, in Cornwall.....108, 116
Tin Exports, Tasmania..... 172
Tin Imports, Germany.....344, 867
Tin Imports, U. S.18, 223, 382, 544, 747, 906
Tin Imports and Exports, Great Britain. 143, 344, 503, 707, 867, 1,028
Tin, Lode, Discovery in Queensland.... 399
Tin Market and Prices.....Weekly
Tin Mining in the Ozarks..... 323
Tin, Obtaining, by Electrolysis, Quintaine's Pat. 734
Tin Ores, Losses in Vanning..... 116
Tin Oxide 613
Tin-Plate Catcher, Cronemeyer's Pat... 290
Tin-Plate Cleaner, Maskrey's Pat..... 490
Tin-Plate Workers' Wages.....461, 705
Tin Production, Australia 18
Tin Production, Bolivia..... 244
Tin Production, China..... 18
Tin Production, Dutch East Indies..... 18
Tin Production, Great Britain.....18, 430
Tin, Production, New South Wales..... 31
Tin Production, Queensland..... 897
Tin Production, Straits Settlements..18, 103, 503
Tin Sales, Dutch East Indies..... 19
Tin Scrap Consumption in Germany..... 634
Tin Smelting..... 773
Tin in Stanley River District, Tasmania 920
Tin Supplies..19, 66, 109, 223, 382, 587, 906
*Tin in Tailings and Slimes, Determination of 928
Tin, Tasmania 150
"Tishomingo, Ind. Ter., Geologic Folio" 611
Tissier's Pat. Producing Gas-Condensing Bodies 813
Titanic Acid, Recovering, Dreher's Pat. 130
Titanic and Lactic Acid Compounds, Dreher's Pat. 854
Titanium Salts, Neutralizing, Dreher's Pat. 130
Titanous Compound, Spence's Pat..... 773
Titcomb's Pat. Rope System for Coal-Bridge Hoists..... 330
Title to Personal Property at Mines, When it Passes Under Lease..... 672
Title, Suit to Quiet..... 269
Todd's Pat. Flux for Welding..... 170
"Tokyo University Calendar"..... 729
Tollner's Pat. Blasting Compound..... 694
*Tomboy Gold Mines Co., Colo., Report. 125
"Tombstone and its Mines"..... 930
*Tombstone Mines, Arizona..... 919
Tonge, Thomas, "Colorado Mineral Resources" 689
Tonge's Pat. Hydraulic Press..... 614
Tonge's Pat. Miner's Drill..... 410
Tongs for Furnace Charging Cranes, Taylor's Pat. 894
"Tonindustric Kalender" 126
Tonopah District, Nev..... 44
Tonopah Mg. Co., Nev., Report..... 852
Tonta Basin Dam, Ariz., Cement for... 422
*Topographic Maps, Value of..... 843
Toronto Stock Quotations.....Weekly
Tously, Victor H., "Twentieth Century Handbook for Engineers and Electricians" 650
*Townsend, Arthur R., Ocampo District. 515
*Townsend, A. R., Some Suggestions for Travel in Northern Mexico..... 315
Transfer-Spout, Olson's Pat..... 614
Transportation, Low Cost of..... 510
Transvaal in 1903..... 26
Transvaal, Agriculture in.....1,031, 1,049
Transvaal, Amalgamation in 841
Transvaal, Chinese Labor for..... 991
Transvaal, Coal 51, 798
Transvaal, Cost of Living in..... 292
Transvaal, Cyanidation in..... 952
Transvaal, Cyanide Trade..... 199
Transvaal, Deep Bore-Holes in..... 452
"Transvaal, Gold Industry"..... 770
Transvaal, Gold Production..6, 26, 178, 338, 498, 701, 818, 863, 1,062
Transvaal Gold Production, Cost of.....1,042
Transvaal, Hospital Hill Shales..... 549
*Transvaal, Kaffir Mine-Workers in..... 281
Transvaal, Labor for..26, 37, 94, 123, 133, 252, 452, 856, 1,017
Transvaal, Mechanical Ingenuity in Mining 474
Transvaal, Metallurgy of..... 928
Transvaal, Mine-Stores Consumption in. 484
Transvaal Mines, Electricity in..... 884
"Transvaal Mines Report"..... 166
Transvaal, Mining Dividends..... 28
Transvaal, Mining Education in..... 388
Transvaal, New Labor Saving Devices in 857
Transvaal, Opening for Mining Students. 857
Transvaal, Politics in..... 94
Transvaal, Population of.....1,017
Transvaal Prospects 592
Transvaal, Rain in..... 533
Transvaal, Rock Drill Tests in.....768, 840
*Transvaal, Slime Problem in..... 435
Transvaal, Steel Cyanide Tanks for..... 164
*Transvaal, Support of Excavations in Mines 719
*Transvaal, Tailings Elevators in..... 481
Transvaal Technical Institute.....388, 751
Trantom's Pat. Pumping Brine..... 530
*Trapp's Pat. Smelting Furnace..... 169
Trassac's Pat. Machine for Preparing Blasting Charges 409
Traverse Quadrant, Nichols's Pat..... 449
Trent, S. V., Re-Grinding Machinery... 512
Tresidder's Pat. Steel Alloy..... 530
Tretch's Pat. Compressometer..... 370
Trezel's Pat. Aluminum Solder..... 854
Tripoli 488, 613
Tripoli Production, Canada..... 393
Tripper for Bucket Conveyors, Bivert's Pat. 128
Tripper for Conveyor-Belts, Ridgway's Pat. 894
*Triumph Digger, Elevator and Excavator 524
Troutman's Pat. Coke Oven Door..... 209
"Trust Companies of U. S."..... 286
"Trusts" 526, 809
Tube Making, Royle's Pat..... 250
Tubes, Bentel's Pat..... 530
Tubes, Thomson's Pat.....1,053
Tulloch's Pat. Concentrator..... 128
Tulloch's Pat. Stamp Mill Attachment.. 128
Tungsten Ore, Demand for..... 725
Tungsten Production, Great Britain..... 430
Tungsten Steel 556
Tungsten in Steel, Determination of.... 362
Tunis, Nitrate of Soda Deposits..... 433
Tunis Phosphate Shipments...569, 667, 705, 946, 1,026
Tunis, Phosphate Trade..... 569
Tunnel Bar, Jackson's Pat..... 250
Tunnel Construction, Clark's Pat..... 973
Tunnel Construction, Holmes's Pat..... 250
Tunnel Construction, Reno's Pat.....1,014
Tunneling Apparatus, Stone's Pat..... 128
Tunneling, Sooysmith's Pat..... 574
*Tura River Dredge, Russia..... 762
Turbine Air-Compressors..... 359
Turbine Governor, Wilkinson's Pat..... 410
Turkestan, Gold Deposits..... 548
Turkey, Coal Imports..... 824
Turkey, Copper Production..... 794
Turkey, Gold Production..... 6
Turkey, Lead Mines of Balia..... 274
Turkey, Quicksilver..... 682
Turk's Island Salt Exports to U. S..... 794
*Turn-Table, Cast-Iron 195
*Turner, H. W., Obituary Notice of Silver Mines at Candelaria, Nev..... 150
Turner, H. W., Bureau of Mining..... 114
Turner, H. W., Native Copper in Greenstone from the Pacific Slope..... 276
Turner's Pat. Placer Mining Machine... 814
Turner's Pat. Rotary Engine..... 934
Turner's Pat. Separating Metals from Ores 814
Turning Machine for Roll-Tires, Sturtevant's Pat. 814
Turquoise 874
Tuyere Attachment for Blacksmiths' Forges, Taber's Pat..... 814
Tuyere, Bertrand & Vorbach's Pat..... 574
Twelvetrees, W. H., on Modern Petrology 514
Twelvetrees, W. H., "Progress of the Mineral Industry of Tasmania"..... 526
Twelvetrees, W. H., "Report on Clay-Deposits at St. George's Bay"..... 770
Twelvetrees, W. H., "Report on the Dial Range, Tasmania"..... 526
Twelvetrees, W. H., "Report on Mineral Fields Between Waratah and Longplains" 88
Twelvetrees, W. H., "Report on Sandfly Coal Mines, Tasmania"..... 88
Tyndall District, Ariz..... 36

U

Uehling's Pat. Ore Agglutinizing..... 369
Uehling's Pat. Annealing Apparatus... 894
Uinta Mountains, Mineral Resources of. 841
Ulke, Titus, "Electrolytic Refining of Copper" 729
Ulrich, E. O., "Lead, Zinc and Fluorspar Deposits of Western Kentucky". 366
"Unakaite, New Occurrence of"..... 650
Underground Workings, Masonry for... 693
Unexploded Charges, Duty of Mining Company Regarding..... 488
*Union Mine, Ariz..... 639
Union Syndicate Financiere.....1,032
United Alkali Co., Report..... 651
"United Kingdom, Mines and Quarries Statistics" 1,011

U. S. Acetate of Lime Exports..542, 745, 945
U. S. Aluminum Exports..... 3
U. S. Aluminum Production.....3, 4, 20
U. S. Ammonium Sulphate Production. 394
U. E. Antimony Imports and Exports.3, 18, 223, 383, 544, 747, 907
U. S. Antimony Production.....3, 4, 18
U. S. Arsenic Imports.....57, 221
U. S. Arsenic Production.....4, 74
U. S. Asphalt Imports and Exports..285. 381, 542, 745, 945
U. S. Assay Office Silver Receipts...Weekly
U. S. Bauxite Production.....4, 123
U. S. Bessemer Steel Production...591. 598
U. S. Bleaching Powder Imports and Exports 57, 381, 542, 745, 945
U. S. British Chemicals in..... 625
U. S. Bromine Production..... 50
U. S., Canadian Products for.....1,006
U. S. Carborundum Production..... 4
U. S. Cement Consumption..... 82
U. S. Cement Imports and Exports.203, 285, 381, 542, 745. 945
U. S. Cement Production..... 4
"U. S. Census of Mines and Quarries".1,050
U. S. Chemical Imports and Exports.. 285, 381, 542, 745, 945
U. S. Clay Imports and Exports..285, 381, 542, 745, 945
"U. S. Clay Working Industries"..... 286
"U. S. Clays"..... 326
U. S., Coal Briquettes in..... 548
U. S. Coal and Coke Imports and Exports.....4, 219, 379, 540, 743, 902
U. S. Coal and Coke Production..4, 52, 912
U. S. Coal Discovery..... 190
U. S. Coal Miners' Wages..... 3
U. S. Coal Mining by Machines..... 718
U. S. Cobalt Oxide Production..... 4
U. S. Coinage....7, 222, 382, 586, 746, 946
U. S. Coinage in 100 Years..... 874
U. S. Copperas Production.....4, 5
U. S. Copper Imports and Exports..3, 8, 222, 382, 543, 713, 746, 906
U. S. Copper Consumption..... 8
U. S. Copper Production...3, 4, 8, 713, 794
U. S. Copper Sulphate Exports..57, 381, 542, 745, 945
U. S. Copper Sulphate Production....4, 57
U. S. Crushed Steel Production.....4, 5
"U. S. Currency Report".....207, 366
U. S. Cyanide Imports..... 57
U. S. Cyanide Production..... 57
"U. S. Diplomatic and Consular Service" 166
U. S. Dynamite Industry..... 279
"U. S. Education Report"..... 286
"U. S. Fish Commission Bulletins".... 246
"U. S. Fish Commissioner Report".... 848
U. S. Flourspar Production.....4, 5
"U. S. Foreign Commerce and Navigation" 650
U. S. Foreign Trade..142, 302, 462, 667, 826, 987
"U. S. Forester Report for 1903"..... 126
U. S. Gas Production..... 394
United States Geological Survey and Proposed Bureau of Mining.....68, 309
"United States Geological Survey, Contributions to Economic Geology"..... 770
United States Geological Survey, Employees of 271
"United States Geological Survey, Geologic Folios" 119, 610, 611
United States Geological Survey, "Mineral Resources Bulletins".....88, 166
United States Geological Survey and the Philippines 931 1,051
U. S., German Chemicals in..... 625
U. S. Gold and Silver Imports and Exports 4, 7
U. S. Gold and Silver Production.....4, 5
U. S. Government Acid Plant..... 279
U. S. Government Statistics..... 833
U. S. Graphite Imports and Exports.124, 280, 285, 745, 945
U. S. Graphite Production.....4, 5, 124
U. S. Incorporation Laws..... 593
"U. S. Internal Revenue Commissioner's Report" 126
U. S. Iron Consumption.....46, 189
U. S. Iron Ore Production.....4, 5, 46
U. S. Iron Ore Production in 1902..... 354
U. S. Iron and Steel Imports and Exports...4, 46, 47, 189, 219, 379, 541, 743, 902
U. S. Iron and Steel Production..4, 46, 189, 204, 268, 349, 421, 591, 598, 665, 786, 824
U. S. Iron Trade, Conditons in..... 388
U. S. Irrigation Law and Mining..... 211
"U. S. Law Relating to Mines and Minerals" 650
U. S. Lead Imports and Exports..4, 11, 223, 382, 544, 747, 907
U. S. Lead Production.....4, 11
"U. S. Life-Saving Service Report".... 689
U. S. Lime Exports.....381, 542, 745, 945
U. S. Limestone Flux Production.....4, 5
U. S. Litharge Production.....4, 5
U. S. Manganese Ore Imports and Exports 285
U. S. Metal and Mineral Production in 1903 3
U. S. Metal Mining Accidents.....79, 119
U. S. Mineral Land Laws.....952, 958, 1,036
"U. S. Mineral Resources".....689, 849
U. S. Mining Bureau..68, 113, 114, 151, 191, 192, 233, 234, 271, 273, 309, 314, 351
United States Mg. Co., Pa., Organization 227
U. S. Mining Law.....952, 958, 1,036
'U. S. Mint Report"..... 848
U. S., Money in...7, 222, 423, 586, 746, 946
U. S., New Caledonia Chrome Ore for.. 350
U. S. Nickel Imports and Exports..4, 223, 383, 747, 907
U. S. Nitrate of Soda Consumption..58, 285, 745, 945
U. S. Nitrate of Soda Stocks and Statistics...101, 263, 422, 542, 585, 786, 945
U. S. Oil Exports.....454, 618
U. S. Oil Production..... 998
U. S. Orange Mineral Production.....4 5
U. S. Oxalic Acid Imports..... 57
U. S. Phosphate Imports and Exports. 58, 285, 381, 542, 745, 946
U. S. Phosphate Production.....4, 5, 58
U. S. Pig Iron Production by Grades.. 445
U. S. Platinum Imports..223, 383, 544, 747, 907
U. S. Potash Imports and Exports..... 285
"U. S. Precious Metals Production".... 848
U. S. Precious Stones Imports..... 204
U. S. Pyrite Consumption..... 125
U. S. Pyrite Imports and Exports..5, 57, 125, 285, 381, 542, 745, 945
U. S. Pyrite Production.....4, 5, 57, 124
U. S. Quicksilver Exports..4, 223, 383, 544, 747, 907
U. S. Quicksilver Production..... 4
U. S. Radio-Active Minerals in..... 728
U. S. Rails Used in..... 591
U. S. Red Lead Production.....4, 5
U. S. Salt Imports and Exports..285, 381, 542, 745, 945
U. S. Saltpeter Consumption..58, 263, 285, 422, 542, 626, 945
U. S., Shipbuilding in..... 114
"U. S. Statistical Abstract"..... 570
United States Steel Corporation and the Clairton Purchase 713
United States Steel Corporation Operations 429
United States Steel Corporation, Report 487
United States Steel Corporation and Steel Prices 592
U. S. Steel Rail Production..... 785
U. S. Sulphur Consumption..... 57
U. S. Sulphur Imports and Exports..5, 57, 285, 381, 542, 745, 945
U. S. Sulphur Production.....4, 5, 57
U. S., Superphosphate Industry..... 342
U. S. Talc Tariff..... 141
U. S. Tar Production..... 394
U. S. Tin Imports.18, 223, 382, 544, 747, 906
"U. S. Trust Companies"..... 286
"U. S. Trusts".....526, 809
U. S. White Lead Production.....4, 5
U. S. Zinc Imports and Exports..4, 5, 223, 383, 544, 747, 907
U. S. Zinc-Lead Pigment Production..4, 5
U. S. Zinc Production.....4, 16, 308
U. S. Zinc White Production.....4, 5
Unzicker's Pat. Valve for Pumps..... 653
*Ural Mountain, Dredging for Platinum. 762
*Ural Mountains, Map of.....721, 722
*Ural Mountains, Occurrence of Platinum in 720
Uranium 270
"Uranium, Analytical Chemistry of".. 88
Uranium Compounds, Radium in..... 756
Uranium Production, Great Britain.... 430
Uranium in Quebec..... 291
Uruguay, Gold Production..... 6
*Utah in 1903..... 42
Utah, Chemical Industry..... 585
Utah, Coal Production.....52, 217
*Utah Copper Co.'s Concentrator.....43, 557
Utah, Cyanide Process in..... 35
Utah, Foreclosure on Mining Property. 249
Utah, Gold and Silver Production 5
"Utah, Iron Ores in the Uinta Mountains" 688
Utah, Lead Mining in..... 110
Utah, Locating Placer and Lode Claims in 1,015
Utah, Milling in..... 604
Utah, Mineral Resources of the Uinta Mountains 841
Utah Mining Dividends.....582, 742, 1,063
Utah, Mining Methods at Bingham.... 760
Utah, Salt Industry.....594, 994

V

*Valenciana Mine, Mex..... 643
Valk's Pat. Gold Washer..... 894
Valuing Gold Mines..... 915
Valuing a Mine Without Sampling.... 873
Valve, Atha's Pat..... 450
Valve, Kennedy's Pat..... 894
Valve, Kryszat's Pat..... 733
Valve, Mansfield's Pat..... 653
Valve, Rarig's Pat..... 370
Valve, Unzicker's Pat..... 653
Valve, Wight & Hyatt's Pat..... 653
*Val Verde Smelter, Ariz..... 36
Vanadium Alloys, Herrenschmidt's Pat. 210
Van Arsdale's Pat. Lixiviating Copper Ores 210
Van Cleave's Pat. Dumping Elevator.. 250
Vancouver Island, Coal Production..... 93
Van de Valk's Pat. Amalgamating Pan. 130
Vandewerker's Pat. Crank Movement for Well Drills..... 529
Van Doren's Pat. Cement Kiln Cleaner. 693
Van Meter & Boss' Pat. Concentrating Minerals by Oil.....1,014
Vanning Tin Ores, Losses in..... 116
Vansant's Pat. Sand Cleaning.....1,014
Varanger Iron Ore Deposits, Norway.. 553
Veach, A. C., "Galena in Louisiana"..1,011
Vein Formation. (See also under Ore Deposits.)
Vein Formation and the New Geology.. 312
Velvet Mine, B. C.....133, 615, 783
Venables' Pat. Brick Machine..... 574
Venezuela, Asphalt Litigation.....218, 221
"Venezuela, Gold in"..... 570
Venezuela, Gold Production..... 6
"Ventersdorp Boulder Beds, Transvaal" 446
*Ventilating Fan, Sirocco..... 608
*Ventilating Fan Structure, Clifford's Pat. 369
Ventilating Salt Mines..... 509
Ventilation, Mine.....427, 431, 632
Venture Corporation vs. W. S. Stratton Estate, Decision..... 68
"Vermilion Iron Range, Minn."..... 246
"Vermont Copper Mines, Notes on"... 729
Vermont, Orange County Copper Deposits 677
*Vesta No. 4 Colliery.....1,039
*Veta Madre Mines, Mex..... 600
Victoria Falls 794
Victoria, Gold Production..6, 32, 134, 172, 372, 493, 533, 616, 978
Victoria, Mine Sampling in..... 631
"Victoria Mines Report"..... 166
"Victoria Year-book" 526
Virginia, Coal Production..... 52
Virginia, Copper Mining..... 37
Virginia, Gold and Silver Production... 5
*Virginia, Magnetic Concentration of Zinc Ore 1,001
*Virginia, Norton Coals of the Big Sandy Basin 235
Virginia, Rutile Production..... 37
"Virginia, Southwestern Salt and Gypsum Deposits" 406
*Virginius Mine, Geology of..... 311
Virgoe, Walter H., Chemistry of Copper Cyanides 795
Vivian & Co.'s Smelter at Murray Mine, Ont. 352
Vollman's Pat. Hoisting Equipment.... 653
Von Dadelszen, E. J., "New Zealand Year-book" 166
*Vulcan Hoisting Engine..... 567
*Vulcan Iron Works, Brake for Aerial Tramways 728
Vulcan Statue for St. Louis Exposition. 665, 704

W

Wabash Railroad System, Eastern Outlet for 561
Wachwitz's Pat. Welding Steel Plates to Aluminum 693
Wages and Cost of Living..... 314
Waggoner's Pat. Separator.....1,053
Wagner-Palmros Co.'s Pat. Rock Drill Regulator 170
Wainwright's Pat. Conveyor..... 854
Wales, Metallurgical Enterprise in..196, 795
Wales, New Coal Field..... 767
Walker, "Metallurgical Analysis and Assaying" 126, 810
Walker, Edward, Equipment of Mining Laboratories 676
Walker, John P., Analysis of Calcines.. 922
Walker, L. T., on Geological Survey of Canada as an Educational Influence.. 402
Walker, S. F., Electricity in Witwatersrand Mines 884
Walker's Pat. Mine Car Coupling..... 934
Walker's Pat. Mining Drill..... 330
*Wallace, Idaho 81
Waller, G. A., "Report on Findon's Copper Section, Mt. Darwin"..... 526
Waller, G. A., "Report on Primrose Mine, Rosebury" 526
Waller, G. A., on Stanley River Tin District, Tasmania..... 920
*Wall's Pat. Ore Crusher..... 573
Walther's Pat. Artificial Stone.....1,054
Wankie Coal Field, Rhodesia...187, 230, 323
Ward, Weeks & Jones's Pat. Mine Car Axle Box 170
War Eagle-Centre Star-Le Roi Mines, Proposed Consolidation 912, 936
Warne, F. J., "Slav Invasion and the Mine Workers" 770, 1,051
Warner, R. L., "Electrically Driven Shops" 286
Warren Copper District, Ariz., Diamond Drilling in 888
Warwick's Pat. Kiln..... 130
Washing Granular Materials, Hoffman's Pat. 1,013
"Washington, Coal Deposits"..... 445
Washington, Coal Production..... 245
Washington Gold and Silver Production. 5
"Washington, Iron Ores"..... 286
Washington, Molybdenite..... 74
Washoe Copper Smelter Arsenic Plant. 276
"Water, Electrolysis of"..... 326
Water Elevator, Frost's Pat..... 289
Water, Flow in a Flume..... 289
*Water-Hoist Engine, Large Vulcan.... 567
Water Investigations in Pennsylvania.. 86
*Water-Jacket, Klepetko 796
Water-Jackets for Blast Furnaces, Construction of 595
Water Measurement, Australian Unit of 592
Water Power, Utilization in Italy..... 81
Water Supply, Hibbing, Minn..... 550
Waterproofing Perous Material, Farnham's Pat..... 128
Watson, T. L., "Geological Relations of Manganese Ore Deposits of Georgia". 809
Watson, T. L., Yellow Ocher Deposits of the Cartersville District, Ga..... 688
Watt, D. A., "Improvement of Rivers" 287
Watt, James, Memorial.....427, 447
Watteyne, Victor, "Office of Accidents in Mines at Frameries"..... 526
Webb, W. Morton, Card Index..... 288
Webb's Pat. Cyanide Filter..... 574
Webber's Pat. Air Compressor..... 129
Weber, F. A., Reflectors in Mines..... 611
Weber's Pat. Cleansing Iron and Steel. 450
Weber's Pat. Hoist and Dump..... 90
Weber's Pat. Mold for Metal-Concrete Construction 489
"Webster Co., Iowa, Geology" 406
Webster's Pat. Conveyor..... 290
Weck, C. A., Low Milling Costs..... 715
Wedekind & Rorschke's Pat. Electrodes 974
Wedge's Pat. Hoist and Conveyor..... 854
Wedge's Pat. Preparing Iron Pyrite for Desulphurization 693
Weed, W. H., Free Gold in Basic Igneous Rocks in Southeastern Russia.. 522
*Weed, W. H., Nickel Deposits of Sohland, Saxony 363
Weed, W. H., "Notes on Copper Mines in Vermont" 729
Weed, W. H., Original Native Gold in Igneous Rocks 440
Weeks, F. B., "North American Geology, Paleontology, Petrology and Mineralogy" 650
*Week's Pat. Concentrator..... 694
Weeple's Pat. Smokeless Fuel..... 814
Weidler's Pat. Pumping Power..... 813
Weidman, S., "Report on Soils and Agricultural Conditions of North Central Wisconsin" 890
Weidman, S., on Wisconsin Igneous Rocks 73
Weinberg, E. A., Pyrite Smelting..... 471
Weiss's Pat. Coal Drill.....1,014
Welch Mold Car for Use at Copper Converters 961
Welding, Dicke's Pat.....320, 409
Welding, Hout's Pat..... 813
Welding Machine, Rowland's Pat..... 813
Welding Steel Plates to Aluminum, Wachwitz's Pat. 693
Welding, Woodson's Pat..... 574
Weldon Gold & Copper Co., Ariz..... 36
Well Boring Tool, Woodward's Pat.... 973
Well, Deep, Raising Liquids from, Moran, De Young & Moser's Pat..... 894
Well Derrick, Knupp's Pat..... 249
Well Drill Crank Movement, Vandewerker's Pat..... 529
Well Drill, Fox's Pat..... 249
Well Drill, Haar's Pat..... 974
Well Drill Jar, Patton's Pat..... 250
Well Drill, McKee's Pat..... 90
Well Drill, Saunders' Pat..... 409
Well Machine, Bunnell's Pat.....1,054
Well, Pump Valve, Duke's Pat..... 289
*Weller's Pat. Concentrator..... 614
Wellman & Moore's Pat. Hoist.....1,014
*Wellman's Pat. Charging Coke Ovens. 450
Wells, Horace L., "Tables for Chemical Calculations" 207
Wells, J. S. C., on Assay of Tin..... 957
Welsh, R. J., Indexing Current Information 89
Welsh Coal Exports..... 260
Welsh Coal Market.....Weekly
Wendel's Pat. Match Composition..... 450
West Coast, Gold Production..... 6
West, H. E., Battery Foundations..... 877
West Virginia, Coal and Coke Production 52, 53, 764
West Virginia, Coal Mine Accidents..53, 765
West Virginia Coal Mines in 1903...53, 764
"West Virginia, Coal Mines Reports".. 848
West Virginia, Coal Miners' Wages..53, 663, 765
*West Virginia, Henry Colliery..... 277
"West Virginia, Map of"..... 326
Westbrook's Pat. Shoveling Device..... 490
Western Australia, Alien Mine Labor in 952
*Western Australia, Filter-Pressing in.. 602
"Western Australia Gold Mines"..... 571
Western Australia, Gold Production..6, 28, 292, 492, 657, 663, 822, 978
*Western Australia, Metallurgical Progress 30
Western Australia, Miners' Wages..... 28
Western Australia, Mine Management.. 236, 872, 1,005
*Western Australia, Mining in..... 28
Western Australia, Mining Dividends.. 28, 411
"Western Australia, Northwestern Gold Fields from Kookynie to Laverton"... 848
"Western Australia, Paleontological Contribution to Geology of"..... 207
*Western Australia, Recent Progress in. 275
"Western Australia Seventh Census"...1,011
"Western Australia, Statistical Register" 770
Western Australia, Sunday Labor in.... 509
Western Chemical Co., Pyrite used in Colorado 247
*Western Coal & Mg. Co. Mine Model at St. Louis Exposition..... 559
Western Fuel Co., Cal., Briquette Plant 682
"Westphalian Coal" 366
Wetherill Separating Co., on Pneumatic Ore Separators 1,052
Wethey, A. H., Construction of Water Jackets for Blast Furnaces..... 595
Wharton, Joseph, President American Iron & Steel Association..... 87
Wheatley, J. Y., "Polar Planimeter and its Use in Engineering Calculations". 88, 287
Wheeler, H. A., Notes on Source of Southeast Missouri Lead..... 517
Wheeler, H. A., Tin Mining in the Ozarks 323
Wheildon's Pat. Feeding Device..... 614
Wherry's Pat. Flux..... 210
*White, C. H., Laboratory for Metallurgical Chemistry 917
White, I. C., "West Virginia Coal Report" 848
White, J., "Altitudes in Canada"..570, 689
White, James, "Map of Northwest Territories and Province of Manitoba"... 570
White Lead Combination in Germany... 874
White Lead, Early Manufacture..... 914
White Lead, James' Pat..... 210
White Lead, Montgomery's Pat..... 330
White Lead, Societe Oettli's Pat..... 974
White Lead Market in 1903..... 58
White Lead Production, U. S.....4, 5
*White Oaks, N. M., Notes on Trip to. 799
White's Pat. Sodium Sulphide..... 529
White's Pat. Mining Pick.....129, 894
Whitton's Pat. Chimney Cowl..... 814
Wiedenfeld's Pat. Lighting Miners' Lamps 774, 1,054
Wiedenfeld's Pat. Lock for Miners' Lamps 129
Wiedenfeld's Pat. Miners' Lamp..... 130
Wieland, G. R., "Polar Climate in Time, the Major Factor in the Evolution of Plants and Animals" 570

Wigan Coal & Iron Co., England, Slag Blocks 309
Wight & Hyatt's Pat. Gas Producer... 409
Wight & Hyatt's Pat. Valve for Regenerative Furnaces 653
Wilder, F. A., "Geology of Webster County, Iowa" 406
Wilder, F. A., New Use for Gypsum... 956
Wild's Pat. Ore Mill 329
Wild's Pat. Rock Breaker C53
Wiley, W. Murdock, on La Luz Tunnel Co 849
Willey Elevator 226
Willey's Pat. Concentrator 210
Willey's Pat. Elevator 90
Wilhelmi's Pat. Condensing Air-Pump.. 773
Wilkinson, W. Fischer, Transvaal Mining 26
Wilkinson's Pat. Turbine Governor..... 410
Willcocks, W., "Assuan Reservoir and Lake Moeris" 610
Willcocks, W., "Restoration of the Ancient Irrigation Works on the Tigris" 446
William Bros.' Pat. Plaster of Paris... 694
Williams, J., Metallurgy of the Transvaal 928
*Williams, S. Herbert, Mining and Business Interests in Korea 355
Williamson & Sumpter's Pat. Electrically Working Reciprocating Tools.... 854
*Williams' Pat. Air Compressor 694
Williams' Pat. Crusher and Pulverizer. 734
Williams' Pat. Locking Miners' Lamps. 450
Willmott, A. B., on Exploration of the Ontario Iron Ranges 401
Willson's Pat. Car Loading 894
Willson's Pat. Conveyor-Loading Device 290
Wilson, G. B., Mining in China 422
Wilson, H. M., "Irrigation Engineering" 287
Wilson, V. T., "Free-Hand Lettering".1,011
Wilson's Pat. Gas Producer 1,013
Wilson's Pat. Making Carbureted Air.. 169
Wilson's Pat. Ore Treating Furnace.... 894
Winand's Pat. Gas Purifier 894
Winding Engine, Electrically Driven in Westphalia 794
Wineland's Pat. Mine Shaft Door..... 450
Wing's Pat. Pump 774
Winona Copper Co., Mich., Report..... 692
Winslow, Arthur, Bureau of Mining.... 234
Winslow, Arthur, Situation in Colorado. 955
Winstanley, Geo. H., Mechanical Equipment of Collieries 567
Wire, Fire-proof 624
Wire Rope 429
Wire Rope Made by the Ancients..... 886
Wire Rope for Transmission of Power.. 389
Wire Solder Rolling Machine, Lotz's Pat. 450
Wisconsin, Baraboo Iron Ore Deposits.. 875
Wisconsin, Igneous Rocks 73
Wisconsin, Lead and Zinc District..... 74
"Wisconsin, Report on Soils and Agricultural Conditions of" 890
Wisconsin Zinc Fields 1,011
Wiseman, P., Bessemer Smelting 353
Wismeyer's Pat. Concentrator 250
Wismeyer's Pat. Separator and Amalgamator 250
Witter, E., "Geology of Algeria"..... 406
Witwatersrand in 1903 26
Witwatersrand, Agriculture.....1031, 1,049
Witwatersrand, Amalgamation..... 841
Witwatersrand, Chinese Labor..252, 856, 991, 1,017
Witwatersrand, Coal.....51, 798
Witwatersrand, Cost of Living on..... 292
Witwatersrand, Cyanidation on..... 952
Witwatersrand, Deep Bore-Holes on.... 452
"Witwatersrand, Development of Gold Extraction Methods on" 729
Witwatersrand, Gold Production..6, 26, 178, 338, 701, 818. 863
Witwatersrand, Gold Production, Cost of.1,042
Witwatersrand, Hospital Hill Shales.... 549
*Witwatersrand, Kaffir Mine Workers.. 281
Witwatersrand, Labor on..27, 94, 133, 252, 452, 856, 991, 1,017
Witwatersrand, Mechanical Ingenuity in Mining 474
Witwatersrand, Metallurgy on..... 928
Witwatersrand, Mine-Stores Consumption on 484
Witwatersrand Mines, Electricity in.... 884
Witwatersrand, Mining Dividends..... 28
Witwatersrand, Mining Education on... 388
Witwatersrand, New Labor Saving Devices 857
Witwatersrand, Opening for Mining Students 857
Witwatersrand, Population of.....1,017
Witwatersrand Prospects 592
Witwatersrand, Rain on..... 533
Witwatersrand, Rock Drill Tests on.. 768, 840
*Witwatersrand, Slime Problem on.... 435
*Witwatersrand, Support of Excavations in Mines..... 719
*Witwatersrand, Tailings Elevators on. 481
Witz, Aime, "Gas and Oil Motors".167, 446
Woakes, Ernest R..... 911
Wolf, Harry J., Bureau of Mining..... 273
Wolff, J. E., "Zinc and Manganese Deposits of Franklin Furnace, N. J.".. 365
Wollastonite Rock-Mass in Mexico..... 364
Wolski's Pat. Deep Boring..... 614
*Woodbridge, D. E., Concentration of Mesabi Iron Ores..... 960
Woodbridge, D. E., Diamond Drilling in an Arizona Copper District..... 888
Woodbridge, D. E., Lake Superior Iron Ore Shipments 205
*Woodbridge, D. E., Ore Dressing at Cananea 1,044
*Woodbury's Pat. Ore Concentrator.... 653
Wood Carbonizer, Perkins's Pat..... 129
Wood, Distillation, Gilmer's Pat..... 530
Wood Distillation, Palmer's Pat..... 450
Wood Distillation, Spurlock's Pat..... 290
Wood, Preservation of.....1,003
Wood, Preserving, Gordon's Pat..... 290
Wood, Preserving, Taylor's Pat..... 853
Wood River District, Idaho.....1,006
Woodson's Pat. Welding Compound.... 574
Woodward's Pat. Well Boring Tool.... 973
*Wood, W. H., Tailings Elevators..... 481
Words and Their Ways...109, 110, 831, 953, 996
"World Almanac" 166
*Wotherspoon, H. H., Jr., Recent Advances in the Utilization of Peat and Lignite 562
Wright's Pat. Coal Washer..... 410
Wright's Pat. Furnace Door..... 973
Wright's Pat. Roasting Furnace..... 893
*Wyer, S. S., Gold-Mining Dredge of Recent Design 925
Wright, Whitaker, Career of..... 148
"Wyoming" 526, 1,011
Wyoming, Coal Production..... 52
Wyoming, Copper Deposits in the Encampment District 1,008
*Wyoming, Copper Production..... 122
Wyoming, Gold and Silver Production.. 5
"Wyoming, Iron Ores of the Hartville District" 485
*Wyoming Mines 40
"Wyoming Mines and Minerals"..... 610
Wyoming, Oil in..... 929
*Wyoming, Topographic Map of..... 843
*Wyoming, Tramway and Power Plant. 40
Wysock's Pat. Checking Mine Fires.... 210

X

X-Rays and Pearls..... 840

Y

Yale, Charles G., California..... 37
Yale, Charles G., "California Mines and Minerals" 286
Yale University, New Departure in Mining Education 230
*Yampa Smelter, Utah..... 43
Yeandle, W. H., Jr., Cyanidation of Copper-Gold Tailings 797
Yeatman's Pat. Hydraulic Nozzle and Joint 130
Yellow Aster Co., Mining and Milling Practice 154
Yellow Pine, Specifications for..... 957
Yerke, J. W., "Report of Commissioner of Internal Revenue" 126
York's Pat. Rolling Mill..... 269
Young, G. J., System of Filing Current Information 247
Young's Pat. Steel Making..... 230
"Yukon Coal Resources".....445, 569
Yukon District, Alaska..... 78
Yukon, Gold Dredging..... 107
Yukon, Gold Production..... 6
Yukon Placer Mining Law..... 896

Z

Zenith Coke Ovens, Minn..... 354
*Ziegler Slate Picker..... 318
Zinc in 1903 15
Zinc, Arkansas 1,058
Zinc, Atmospheric Action on.....154, 437
Zinc-Blende, Luminescent.....1,000
Zinc-Blende, Radium in..... 571
Zinc Blende Separating, Jamieson & Odling's Pat..... 170
*Zinc-Box, First in Kalgoorlie Gold-Field, W. A..... 31
Zinc Carbonate Production, Missouri... 13
Zinc Ceilings 877
Zinc Cement for Pipe Joints..... 439
Zinc Collectors, Muslin for..... 773
Zinc Consumption, Germany..... 788
Zinc Cyanides, Double with Potassium and with Sodium..... 845
Zinc Deposits, Wisconsin.....74, 1,011
Zinc Dust Market and Prices..... 625
Zinc, Electrolytic Production of..... 772
Zinc Exports, Spain.....161, 687, 840
*Zinc Furnace, Schmieder's Pat..... 653
Zinc, Hydrometallurgy of..... 314
Zinc Hydrosulphite, Bolle's Pat..... 974
Zinc Imports and Exports, Germany.. 344, 868
Zinc Imports and Exports, Great Britain.....143, 344, 504, 707, 868, 1,028
Zinc Imports and Exports, U. S..4, 5, 223, 383, 544, 747, 906
*Zinc Industry in Missouri in 1903..... 80
Zinc-Lead Deposit, New in Germany... 445
"Zinc, Lead and Fluorspar Deposits of Western Kentucky" 366
Zinc-Lead Pigment Production, U. S.... 4, 5
*Zinc and Lead Slimes Treatment in Joplin 683
"Zinc and Manganese Deposits of Franklin Furnace, N. J."..... 365
Zinc Market and Prices.....Weekly
"Zinc Mines of New Jersey"..... 770
Zinc Mining Accidents, Missouri..... 119
*Zinc Mining, Cost of in Joplin District 81, 111, 154. 312
"Zinc Mining in East Tennessee"..... 770
Zinc in North Wales..... 362
*Zinc Obtaining, Hopkins' Pat..... 450
*Zinc Ore, Magnetic Concentration in Virginia 1,001
Zinc Ore Production and Spelter Prices. 672
Zinc Ore Treatment, Kaiser's Pat..... 614
Zinc Ores in British Columbia..... 844
Zinc Oxide Imports, New York..... 221
Zinc Oxide Market in 1903..... 58
Zinc Oxide, Oettli's Pat.....1,014
Zinc Oxide, Reduction Temperature of.1,045
Zinc Process, Ellershausen.....1,052
Zinc Production, Austria..... 308
Zinc Production, Belgium..... 308
Zinc Production, Canada.....24, 393, 648
Zinc Production, France..... 308
Zinc Production, Germany..... 308
Zinc Production, Great Britain.....308, 430
Zinc Production, Illinois..... 16
Zinc Production, Indiana..... 16
Zinc Production, Italy..... 308
Zinc Production, Kansas..... 16
Zinc Production, Leadville, Colo.86, 196, 434
Zinc Production, Missouri.....16, 80
Zinc Production, Poland..... 308
Zinc Production, Spain..... 308
Zinc Production, U. S.....4, 16, 308
Zinc Production of the World..... 308
Zinc, Recent Literature on Geology of 365, 770, 1,011
Zinc Roasting Furnace Decision..... 549
Zinc Sheet Bending Machine, Bit's Pat. 449
Zinc Sheet Prices..... 907
Zinc Sheets, Heating for Press-Work.. 474
Zinc Shipments, Kansas-Missouri.....Weekly
Zinc Situation..... 508
Zinc, Soft..... 480
Zinc Sulphide, Bermont's Pat..... 290
Zinc Sulphides, Electrolytic Treatment. 876
Zinc Tailings Treatment, Potter & Delprat's Pat..... 172
Zinc Tariff, Russia..... 127
Zinc White, Duty on..... 973
Zinc White Production, U. S..... 4, 5
*Zollern II Colliery Electric Hoist.....1,046
Zwerk's Pat. Cement Shingle..... 89
Zwoyer's Pat. Preparing Molding Material 250

MINING, INDUSTRIAL AND PERSONAL NOTES.

A

Aarons, J. Boyd..... 493
Abbott, Jas. W.....453, 777
Abe Lincoln Mine, Colo.....136, 699
Acachuma Quicksilver Co., Cal..... 738
Adams, George I..... 577
Adams, Henry..... 897
Adela Mine, Mex..... 212
Adieu-Vat Placer, French Guiana..... 458
Adler, H. G. V..... 978
Admiral Mine, Cal..... 454
Admiral Mine, Colo..... 535
Advance Mine, Cal.....779, 980, 1,020
Advance Packing & Supply Co., Ill... 898
Adventure Con. Mg. Co., Mich....216, 257, 259, 338, 376, 456, 497, 620, 821, 982, 1,060
Adventure Mine, Colo..... 215
Afterthought Mine, Cal. 95, 214, 255, 295, 415, 819
Ager Coal Mine, Cal.....940, 1,060
Agnew Mine, Mich..... 216
Ahmeek Mine, Mich. 497, 580, 941, 982
Ajax Mine, Idaho.....136, 456
Ajax Mg. Co., Mont.....1,021
Akron Engineering Co., O..... 333
Alabama Car Service Association..... 500
Alabama Con. Coal & Iron Co..... 744
Alabama District, United Mine Workers, 99, 623, 984
Alabama Phosphate Co., Ala..... 422
Alabama Steel & Wire Co., 180, 261, 420, 541, 665, 703, 785
Alamo Mine, Oregon..... 491
Alaska Copper Co., Alaska..... 76
Alaska Mine, Cal..... 135
Alaska Tin Mg. Co., Alaska..... 980
Alaska Treadwell Gold Mg. Co., Alaska. 75
Albany Mine, Minn.....416, 860
Alcania Tin-Plate Co..... 342
Alder Creek Mg. Co., S. D..... 337
Alder Gold Mg. Co., Mont. 216, 456, 581
Alderson, Victor C..... 975
Aldrich, W. H..... 132
Alexander, G. E..... 493
Alexandria Gold & Silver Mg. Co., Mex. 94
Alferena Mg. Co., Mex..... 21
Alger-Kansas Mine, Colo..... 96
Alhambra Mine, Colo..... 739
Alianza Nitrate Co., Chile..... 954
Alice Mine, Ariz..... 454
Allan, John B..... 697
Alleghany Mg. Co., Cal. 295, 899, 1,059
Allegheny Coal Co., Pa..... 655
Allegheny Mg. Co., Colo..... 496
Allen, C. M..... 373
Allen, H. D..... 493
Allen, J. H..... 533
Allen Mine, Oregon..... 662
Allentown Rolling Mills, Pa..... 132
Allis-Chalmers Co..213, 294, 333, 373, 413, 539, 578, 618, 658, 737, 859, 898
Allis-Chalmers-Bullock, Ltd., Can..... 778
Allison Ranch Mine, Cal..... 414
Allouez Mg. Co., Mich. 376, 702, 781, 821, 822, 941
Almada Mg. Co., Oregon..... 137
Almoloya Mg. Co., Mex.....658, 1,017
Alpha Mg. Co., Colo..... 699
Alpine Mine, Oregon..... 377
Alps Mg. Co., Colo.....255, 455, 859
Alta Mines Co., Colo..96, 215, 256, 416, 536, 820
Alta-Quincy Mine, Utah....741, 983, 1,022
Altadena Mine, Cal.....455, 820, 859
Altabert Dredging Co., Cal..... 619
Altamara Mg. Co., Mex.....372, 736
Altata Mine, Ariz..... 618
Althouse Mine, Oregon..... 497
A. L. 282 Mine, Ont..... 132
Alturas Mg. Co., Idaho.....1,006
Amador City Miners' Union, Cal..... 775
Amador Climax Mine, Cal.....698, 779
Amador Con. Mg. Co., Idaho.....1,021
Amador Mine, Mont..... 821
Amador Queen Mg. Co., Cal.....374. 738
Amalgamated Association of Iron, Steel & Tin Workers...181, 380, 400, 421, 501, 585, 625, 744, 786, 825, 866, 905, 1,065
Amalgamated Copper Co., Mont...98, 178, 217, 338, 378, 539, 615, 735, 941, 942, 1,055
Amalgamated Salt Co., Cal..... 301
American Air Compressor Works, N. Y. 494
American Blower Co., Mich....254, 534, 738
American Bridge Co., 91, 173, 373, 534, 618, 697, 858
American Casting Co., Ala.....100, 824
American Chemical Society..... 818
American Chemical Society, New York Section 1,018
American Concentrator Co., Mo..... 374
American Copper Co., Ariz..... 618
American Development & Mg. Co., Mont. 456
American Dredging Co., Cal..... 255
American Eagle Gold Mg. Co., Idaho, 256, 451, 620
American Eagle Mine, Colo..... 735
American Engineering & Reduction Co., O. 453
American Flag Mine, Utah..... 942
American Forged Steel Flange Co., Ill. 659
American Foundrymen's Association, 737, 858, 1,019
American Girl Mg. Co., Cal.....698, 738
American Gold Dredging Co., Colo.... 820
American Gold Fields Co., Oregon..258, 417
American Iron Co., Cal..... 334
American Lead Co., Mo..... 216
American Lithia & Chemical Co., Cal.. 371
American Locomotive Co..132, 213, 413, 578, 819
American Metal Co..... 867
American-Mexican Mg. & Development Co., Mex.....576, 977
American Mine, Cal.....214, 698
American Mg. Co., S. D..... 297
American Mg. & Exploration Co., Mex.. 252
American Nettie Mine, Colo..... 215
Americano Mine, Mex. 133
American Pig Iron Storage Warrant Co.....539, 665
American Process Co., N. Y..... 254
American Rutile Co., Va..... 37
American Sheet & Tin Plate Co....92, 101, 141, 181, 262, 501, 666, 705, 786, 1016, 1,065
American Smelters' Steamship Co..743, 937
American Smelting & Refining Co...11, 21, 22, 42, 44, 59, 171, 216, 256, 331, 372, 377, 575, 576, 735, 776, 783, 856, 895, 902, 937
American Society of Civil Engineers.. 724
American Society for Testing Materials.1,057
American Steam Gauge & Valve Mfg. Co. 294
American Steam Pump Co., Mich..334, 618
American Steel & Wire Co.....301, 422
American Union Mine, Pa..... 537
American Well Works, Ill..... 858
American Zinc & Chemical Co., Colo... 333
Aminoff, Erik von..... 777
Amparo Mg. Co., Mex.....372, 736
Anaconda Coal Co., Mont..... 376
Anaconda Copper Co., Mont....620, 740, 863
Anaconda Mine, Cal..... 739
Anaconda Mine, W. A..... 617
Anderson, J. J..... 253
Anderson, Robert J., vs. Davis and Hall 93
Angelus Mine, Cal..... 859
Anglo-Sicilian Sulphur Co., Sicily...502, 625
Anita Mine, Ariz..... 414
Anna Barbara Mg. Co., Cal..... 454
Anna Mine, Colo.....820, 859, 1,020
Annie Laurie Mg. Co., Utah.....337, 581
Antioquena de Tijidos Co., Colombia.... 616
Antioquia Gold Mg. Co., Colombia..... 616
Apollo Con. Gold Mg. Co., Wash..... 538
App Mine, Cal.....93, 171, 411, 451
Aragon Mine, Mich.....216, 821
Arbona Mine, Cal..... 175
Archer Iron Works, Ill..... 618
Argall, Philip.....67, 91, 253, 533, 1,015
Argall, Philip Henry.....1,018
Argentum-Juniata Mg. Co., Colo..... 536
Argonaut Mine, Mont. 815, 901
Argonaut Mg. Co., Cal.....174, 295, 454
Argosy Mine, Idaho.....1,021

Argus Mine, Colo. 535
Arizona Copper Co., Ariz. 214, 255, 294, 452, 495, 657, 659, 679, 819, 1,019
Arizona Gold & Copper Co., Ariz. 36
Arizona Mg. & Development Co., Ariz., 214, 334
Arkansas Phosphate Co., Ark. 745
Arlington Mine, B. C. 297, 338, 371, 538
Armstead, H. H. 131
Arnold Mine, Ind. 700
Arnold Mg. Co., Mich. 580, 941, 1,060
Arrino Copper Mine, W. A. 292
Arthur, Edwin P., Jr. 212
Aruba Phosphate Co., Dutch West Indies 102
Aschersleben Potash Works Co., Germany 625
Ashanti Gold-fields Corporation 576
Ashburton Mg. Co., Cal. 980
Ashcroft, Edgar A. 293
Ashmore, G. Percy 658
Ashville Coal & Coke Co., Pa. 377
Ashworth, George S. 293
Associated Gold Mines, W. A. 134, 212, 411, 617, 897, 978
Associated Northern Blocks Mine, W. A. 412
Associated Oil Co., Cal. 735
Associated Silver-Lead Mines, B. C. 736
Astley, J. W. 131
Astor Mg. Co., Colo. 375, 699
Asuncion Mine, Mex. 701, 856
Athabasca-Venus, Ltd., B. C. 532, 1,022
Athelstan Mine, B. C. 452
Athens Mg. Co., Ill. 981
Atlantic Mg. Co., Mich. 256, 378, 456, 497, 620, 781, 940, 1,060
Atlas Car & Mfg. Co., O. 254
Atlas Mine, Idaho. 336, 456
Atlas Mine, Ind. 336
Atlas Mine & Milling Co., Colo. 375
Atlin Mine, B. C. 656
Atlin Mines Consolidation, B. C. 532
Atlin Mg. Co., Ont. 211
Atwater, R. M. 131, 493, 777
Auburn Ball Bearing Co., N. Y. 698
Aultman Co., O. 333
Auriferous Mine, Cal. 819
Aurora Con. Mg. Co., Mex. 133
Aurora Mine, Cal. 255
Austin, H. C., Mine Purchase in California 495
Austin Group Mg. Co., Cal. 1,058
Austin Mfg. Co., Ill. 979
Austin, W. L. 332, 533, 777, 858, 938
Avery, Walter T. 979
Avoca Deep Leads Mine, W. A. 372
Axtell, F. T. 658
A. Y. & Minnie Mine, Colo. 96, 415, 579
Aztec Turquoise Co., Ariz. 659

B

Babb, Percy A. 1,018
Babcock & Wilcox Co., N. Y. 494, 738
Babel Lead Mg Co., Ill. 860
Bacera Mine, Mex. 372
Badger Mine, Colo. 1,020
Badger Mine, Oregon 861
Bagdad Mg. Co., Cal. 34, 415, 619
Bahusen, J. H., & Co., Mex. 411
Bailey Bros.' Mines, Cal. 940
Bailey, Edward T. 332
Bailey, J. Trowbridge 212, 978
Bain, H. Foster 373
Baisley-Elkhorn Mine, Oregon 1,060
Baker, C. O. 897
Baker, J. F. & F. H. vs. C. A. Smith. 775
Baker, J. H. 493
Baker, John T. 1,058
Baker, J. T., Chemical Co., Pa. 1,058
Baker & Adamson Chemical Co., Pa. 1,058
Baker Mines, Cal. 375
Balakiala Con. Mg. Co., Cal. 535, 816
Bald Mountain Mine, Cal. 454, 1,020
Balderson, George 735
Baldwin Locomotive Works. 373, 374, 618, 859
Ball, W. 658
Balsam Flat Mg. Co., Cal. 255
Balsas Mine, Mex. 1,056
Baltic Iron Mine, Mich. 620
Baltic Mg. Co., Cal. 334
Baltic Mg. Co., Mich. 256, 376, 456, 497, 620, 781, 821, 981, 1,021
Bancroft, Geo. J. 131, 293, 453, 493, 737, 858
Bangor Con. Mg. Co., Cal. 980
Banker Mg. & Milling Co., Colo. 175, 256, 295
Banks, Noble C. 131, 533
Banner Mine, Cal. 619, 698
Banta Hill Con. Mines Co., Colo. 415
Barber, Geo. D., vs. Consolidated Golden Trout Mg. Co., Cal. 936
Barber, George M. 897
Barbour, Thos. J. 737
Barker Chemical Co., Fla. 905
Barker, H. A. 979
Barnes-King Mine, Mont. 456, 861, 982
Barnes Mine, Colo. 215
Barnes, Phineas 938
Barnett, William J. 858
Barney, William G. 658
Barnhart, G. H. 131
Barranca del Cobre Mine, Mex. 212
Barranca del Oro Mines, Mex. 701
Barrett, Hugo, vs. W. H. Nosser. 615
Barringer Mine, N. C. 457
Barron, George D. 373
Barry, Hubert P. 777
Barstow Gold Mg. & Milling Co., Colo., 256, 335, 579, 739
Bartlett Borax Co., Cal. 135
Bartlett, C. O., & Snow Co., O. 91, 132, 213, 254, 413, 578, 898
Bartlett Mine, Colo. 96, 660
Bartlett & Schaeffer Oil Well, Texas. 498
Bartlett Tunnel, Colo. 415
Basin Reduction Co., Mont. 581
Basler Mg. Co., Cal. 855, 1,020
Bassick Mine, Colo. 699, 739
Bassler Mine, Cal. 739, 779
Batcheller, J. H. 897
Bates, Putnam A. 293, 778
Batson's Oil Field, Texas. 177, 337, 497. 537, 662, 782. 862
Battle Mountain Gold Mg. Co. vs. James Doyle 1,015
Bavarian Gold Mg. & Milling Co., Colo. 455
Bay Counties Power Co., Cal. 411
Bay State Mine, Cal. 414
Bayley's Reward Mine, W. A. 332, 777, 978
Beadle, T. B. 293
Beal, M. S. 253
Beale, A. H. 778
Beals, William, Jr. 658, 1,057
Beardsley, G. F. 131, 493
Bear Gulch Mg. & Milling Co., S. D. 1,061
Beartop Mg. Co., Idaho. 1,021
Beatty, A. Chester. 91, 131, 293, 412, 818, 897, 978
Beatty Oil Co., Texas. 782
Beatty, Walter R. 412
Beaudette, A. J. 131
Beaumont Oil-Field, Tex. 177, 337, 498, 662, 782, 862
Beaver Con. Mg. Co., Utah. 177, 581
Beaver-Harrison Mine, Utah. 782
Beaver Hill Mine, Oregon. 941
Becker, C. 453
Beech Creek Coal & Coke Co., Pa. 137
Beecher, Charles Emerson 293
Beekman Hill Mine, Cal. 135
Beeler, Henry C. 533
Behrend, F. D. 91
Belcher Mg. Co., Wash. 258
Belgo-American Drilling Trust, Wyo. 862
Bell, B. T. A. 173, 333, 373
Bell Boy Mine, Mont. 700
Bell, Gen. 735
Bell, J. McIntosh 896
Bell Mine, Cal. 135, 175, 415, 619
Belle Eldredge Mine, S. D. 1,061
Belle of Thunder Mountain Mg. & Milling Co., Idaho 176
Bellevue Mg Co., Cal. 135, 214, 820
Bellinger, Hermann C. 493, 816
Belmont Coal Mg. Co., Pa. 137
Belmont Mine, Mont. 417
Belt Mine, Mich. 376
Belvedere Mine, Colo. 739
Ben Doran Mine, Ariz. 534
Ben Franklin Mine, Colo. 1,059
Ben Harrison Mine, Ariz. 374, 980
Bendigo & Eaglehawk Mine 657
Bendigo Mining, Victoria 134
Benson Mine, Cal. 819, 1,020
Bensusan, A. J. 91
Bensusan, E. V. 332
Bensusan, S. L. 818
Benton Mg. Co., Colo. 96, 619
Bergman, N. C. 131
Berry United Mine, W. A. 133
Bertha Gold Mg. & Milling Co., Colo. 981
Berwind-White Coal Mg. Co., Pa. 253, 413, 700
Bessemer Iron Co., Mich. 216, 416
Bessemer Ore Association 261
Bessie Mine, Mex. 252
Beta Mine, Mich. 216
Bewick, Moreing & Co. 133, 292, 372, 856
Bidwell, Joseph M. 897
Big Bar Mg. Co., Cal. 255
Big Blue Ledge, Cal. 255
Big Bonanza Mine, S. D. 417
Big Boulder Mine, Cal. 135
Big Chief Mine, Colo. 295
Big Dan Mine, Ont. 896
Big Dipper Mine, Cal. 334, 779
Big Five Mg. Co., Colo. 335, 375, 1,059
Big Four Gold Mg. Co., S. D. 97, 137, 337, 941
Big Four Mine, Cal. 579
Big Four Mine, Mont. 740
Big Four Mg. Co., Colo. 820
Big Idaho Mg. Co., Idaho. 176
Big Indian Mg. Co., Mont. 417
Big Kanawha Mg. Co., Colo. 455
Big Master Mine, Ont. 211
Big Muddy Coal & Iron Co., Ill. 860
Big Tree Mg. Co., Cal. 1,058
Bigelow Mine, Cal. 455
Billings Mine, S. D. 457
Bind, E. M. 333
Bingham Con. Mg. & Sm. Co., Utah, 42, 97, 137, 178, 217, 258, 337, 377, 418, 457, 498, 538, 581, 621, 662, 663, 701, 741, 782, 822, 862, 901, 942, 983, 1,022, 1,061
Bingham West Dip Mine, Utah. 983. 1,022
Bird, Robert M. 577, 658
Bird's Nest Mine, Colo. 660
Birmingham Iron & Steel Co., Ala. 704
Birmingham Trust & Savings Co., Ala. 624
Birthday Gold Mg. Co., Victoria. 857
Bisbee District, Ariz. 975
Bisbee West Mine, Ariz. 618
Bismarck Nugget Gulch Mg. Co., Mont. 901
Biwabik Mg. Co. 1,021, 1,060
Black Bay Mg. Co., Ont. 1,023
Black Bess Mine, Utah 178
Black Butte Mine, Oregon. 137, 1,060
Black Canyon Copper Co., Ariz. 659
Black Diamond Coal Mines, Wash. 902
Black Diamond Copper Co., Ariz. 334
Black Diamond Mine, Utah. 741, 822
Black Eagle Gold Mg. Co., S. D. 258
Black Eagle Mine, Oregon. 861
Black Forest Mine, Nev. 1,060
Black Friday Mine, Mont. 456
Black Hawk Mine, Mont. 740
Black Hills Copper Co., S. D. 97, 417, 941
Black Hills & Duluth Copper Mg. Co., S. D. 1,022
Black Hills & Denver Con. Mg. Co., Colo. 981
Black Hills Mining Association, S. D. 497
Black Lake Mine, Idaho. 699
Black Mountain Mg. Co., Ariz. 779
Black Oak Mg. Co., Cal. 295, 415, 455, 495, 619, 859, 936, 939
Black Pearl Mg. Co., Idaho. 699, 1,042
Black Rock Mg. Co., Ariz. 174
Black Swan Mine, Cal. 414
Black Warrior Copper Co., Amalgamated, Ariz. 134
Blacklick & Yellow Creek Railroad Co. 1,061
Blackstock, T. G. 1,016
Blackwell, Geo. G., Sons & Co., Eng. 454
Blaine Mine, Colo. 699
Blair Mine, Colo. 1,059
Blake, Geo. P., Mfg. Co., N. Y. 374
Blake, James R. 91
Blake Mine, Colo. 175
Blake, W. P. 897
Blakemore, G. H. 978
Blakemore, William 253
Blanchard Mines, Cal. 940
Bledsoe Mine, Colo. 579
Block 14 Mine, N. S. W. 172
Blood, George D. 332
Bloomer Hill Mine, Cal. 255
Bloomfield Coal Mg. Co., Ind. 1,021
Blount, Bertram 333
Blow, A. A. 253, 858, 1,018
Blow, J. J. 938, 1,018
Blue Acre Mine, Utah 662
Blue Bird Mine, Ariz. 414
Blue Gravel Mine, Cal. 295
Blue Channel Gold Placer Mg. Co., Oregon 497
Blue Hill Mine, Cal. 660
Blue Jay Point Mine, Cal. 859
Blue Lead Mine, Cal. 255
Blue Lead Mine, Oregon. 1,061
Blue Ledge Mg. Co., Cal. 1,059
Blue Mine, Mich. 900
Blue Peter Mine, N. S. W. 252
Bluff Springs Coal Co., Colo. 455
Bob Tail Mine, Colo. 215
Bodfish, Fred V. 737
Bodie Mine, Wash. 98, 901
Body, Joseph F. 453
Boehmer, Max 253
Boggs, Wm. R., Jr. 253
Bohn, C. A. 577, 818
Bon Air Mine, Colo. 699, 859
Bonanza Creek Hydraulic Mining Co., Klondike 777
Bonanza Mine, Oregon. 782, 1,016, 1,060
Bonar, James, & Co., Pa. 1,058
Boneset Mine, Cal. 980
Bonne Aventure Placer, French Guiana 458
Bonnevie, N. C. 332, 858, 979, 1,057
Bonnevie & Lee, Colo. 658
Bonney, R. C. 373
Bonton Mine, Cal. 554
Borrow, Frank K. 493
Bosqui, F. L. 172, 412, 617, 737, 938
Boss, Ira C. 213
Bossuet, Henri 858
Boston-Cleveland Mg. Co., Colo. 255
Boston Con. Mg. Co., Cal. 458
Boston Con. Copper & Gold Mg. Co., Utah 43, 701
Boston Copper Co., Mont. 97
Boston & Lockport Block Co. 254, 413
Boston & Maine Railroad Co. 864
Boston Mill, Colo. 335
Boston Mine, Cal. 980
Boston & Montana Con. Copper & Silver Mg. Co., Mont. 575, 615, 620, 700
Boston Quicksilver Mine, Cal. 816
Bosworth, H. C. 897
Boulder County Mg. Co., Colo. 1,020
Boulder Deep Levels, W. A. 1,017
Boundary Creek Mg. & Milling Co., B. C. 856
Boundary Ore Shipments, B. C. 98, 138, 178, 218, 259, 297, 338, 377, 418, 458, 498, 538, 582, 621, 663, 701, 741, 783, 822, 863, 902, 942, 1,062
Boutwell, J. M. 493
Bowerman-Dunn Mine, Colo. 175
Boyd, Lucius J. 91, 658
Boyd Mine, Colo. 699
Boyd, Richard 778
Boyle, J. P. 858
Bradford Mine, Ind. 700
Bradley, F. W. 577
Brady, Samuel 577
Brainard, C. E. 778
Branch Mint Mg. Co., S. D. 741, 941
Brandes, Juan F. 173, 212, 293, 778
Branner, J. C. 453
Braschi, Victor M. 818
Braschi, Victor M., & Bro., Mex. 254
Braun, J. W., Co., Cal. 577, 979
Brawley Mine, Ga. 496
Breen, James 371
Brereton, Robert M. 617
Bridal Veil Basin, Colo. 496
Bridgeport Mine, Cal. 1,058
Brier Hill Iron & Coal Co., Pa. 1,026
Bright Hope Mine, Cal. 899
Bright Star Mine, Cal. 454
Brighton Mine, Colo. 175
Brilliant Central Mine 897
Brisels Tin Co., Tasmania. 172, 617
Bristol Co., Conn. 778
Bristol Mine, Mich. 176, 1,021
Britannia Gold Mg. Co., Ont. 211
Britannia Mine, B. C. 291
Britannia United Mine 657
British America Dredging Co. 977
British American Development Co. 896
British Broken Hill Mine. 617
B. C. Assay & Chemical Supply Co. 697
British Columbia Copper Co., B. C. 291, 297, 418, 452, 657, 937, 1,062
British Columbia Provincial Mining Association 291, 453
British Columbia-Snowshoe Gold & Copper Mines Consolidation. 162, 171, 212, 378, 418
B. C. Standard Mg. Co., B. C. 371, 615
British Johns-Manville Co. 92
British Mine 657
British South Africa Co. 412
British Westinghouse Electric & Mfg. Co. 333
Britton, Justice 173
Broad Top Coal Shipments, Pa. 782
Broadwater Mine, Mont. 376
Broda Mg. & Sm. Co., Cal. 535, 859
Broderick & Bascom Rope Co. 254, 819
Brodigan, C. D. 858
Broken Arrow Coal & Iron Co., Ala. 583
Broken Hill, N. S. W., Mining at. 372
Broken Hill Proprietary Co., N. S. W., 230, 252, 372, 493, 616, 857, 978
Broken Hill South Blocks Mine. 493, 617
Bromly, A. H. 697
Brookshire Oil Co., Cal. 255
Brophy Mine, Cal. 135
Brotherton Mine, Mich. 941
Broughton, U. H. 746
Brown Bear Mine, Cal. 135
Brown, C. C. 778
Brown Corliss Engine Co., Wis. 213
Brown, D. R. C. 697
Brown, Hoel 978
Brown Hoisting Machinery Co., O. 174
Brown, Myles. 91, 897
Brown, Robert Gilman 711, 737, 897
Browne, Ross E. 91
Browning, Walter J. 897
Brownlee, J. H. 293
Brubeck, Theodore 333
Bruce, R. B. 897
Bruchhold, C. 858
Brunner, Mond & Co. 461, 905
Brunswick Con. Mg. Co., Cal. 174, 454, 939
Brunswick Mg. Co., Colo. 699
Brunton, D. W. 172, 897
Brush, B. F. 173
Bryer Antimony Mine, S. D. 941
Bryson, J. L. 212
Buchanan, George O. 253
Buckeye Mg. Co., Cal. 1,059
Buckeye Mine, Ariz. 374, 414, 1,019
Buckeye Mine, Cal. 899
Buckeye Mine, Colo. 496, 579
Buckeye Mine, Oregon 861
Buckhorn Mine, Cal. 95
Buckhorn Mine, Nev. 1,022
Buckhorn Mine, Utah 418, 498, 741
Buckley, E. R. 213
Buena Vista Mg. Co., Va. 1,061
Buena Vista Mine, Mex. 701, 736
Buena Vista Mg. Co., Colo. 335, 1,020
Buff & Buff Mfg. Co., Mass. 374
Buffalo-Arizona Mg. Co., Ariz. 414
Buffalo Hump District, Idaho. 456, 976
Buffalo & Susquehanna Mine, Minn. 176
Buffalo Steam Co., N. Y. 174
Bull Channel Placer Mg. Co., Oregon. 621
Bull Creek Hydraulic & Dredging Syndicate, B. C. 817
Bull Run Mine, Mont. 982
Bull of the Woods Mine, Oregon. 621
Bullen, R. H. P. 777
Bullion-Beck & Champion Mg. Co., Utah 537
Bullion King Gold Mg. Co., Colo. 660
Bullion Mg. Co., Cal. 95, 1,058
Bullock Electric Mfg. Co., O. 578, 819, 858
Bullock, Harry 818
Bully Choop Mine, Cal. 455
Bully Hill Mg. Co., Cal. 980
Bulwer, Henry F., vs. Yukon Crude Oil Co., Cal. 656
Bunce, Walter H. 1,018
Bunker Hill Mg. Co., Cal. 214, 374, 619, 738, 779
Bunker Hill & Sullivan Mg. & Concentrating Co., Idaho. 371, 580, 735, 781
Bunker Hill & Sullivan vs. Empire State Idaho Mining & Development Co. 976
Burbanks Mine, W. A. 332
Burckhardt, Karl 373
Burger, C. C. 658, 818
Burke, Stevenson 737
Burke & Sweeney Sapphire Mines, Mont. 137
Burley Gold Mg. Co., Ont. 896
Burlington Boulder Mg. & Milling Co., Colo. 135
Burlington Gold Mg. Co., Ariz. 939
Burlington Gold Mg. Co., S. D. 97, 417
Burls, H. T. 91
Burrell Chemical Co., Mich. 585
Burro Mine, Ariz. 659
Burro Mountain Smelter, N. M. 861
Burt Mfg. Co., O. 373, 698
Burt Mine, Mich. 216
Burt Placer, N. C. 167
Burtfille District, W. A. 492
Bush, T. G. 658
Butler Bros., Ill. 740
Butler-Liberal Mg. Co., Utah. 137, 377
Butte Copper Mg. & Sm. Co., Mont., 177, 217, 376
Butte Mg. Co., Cal. 859
Butte Oil Co., Mont. 257
Butte Ore Market 815
Butte Sampling Works, Mont. 457
Butte Star Mine, Cal. 495
Butterfly-Terrible Gold Mg. Co., Colo., 96, 215, 296, 376, 496, 536, 820
Butters, Charles 253, 493, 617
Buttgenbach, J., & Co., Fla. 381, 745
Buxton Mine, S. D. 417
Buzzo, Thomas 858

C

Cable Mine, Ind. 900
Cactus Mine, Utah. 44, 662
Calaveras County, Cal., Mines. 95
Caldwell, H. W., & Son Co., Ill. 294
Caldwell Iron Ore Explorations, Ont. 736
Caledonia Mine, Colo. 255
Caledonian Coal Co., N. S. W. 32, 372
Calhoun Tunnel, Colo. 580
California Anti-Debris Association. 92. 367, 451, 508, 548, 575
California Coast Co., Cal. 738

California Con. Mg. Co., Idaho..... 817
California Debris Commission..451, 508, 1,055
California & Detroit Mg. Co., Cal..... 255
California Draper Mines, Cal..... 899
California Gas & Electric Corporation.. 411
California, Gold Discovery in Ferry Gulch 695
California Grass Valley Gold Mg. Co., Cal. 535, 579
California Gulch Mg. Co., Colo.....295, 739
California Hydraulic Engineering & Supply Col., Cal..... 413
California King Mines Co., Cal..... 375
California Mine, Ariz.....1,058
California Mine, Idaho..... 176
California Miners' Union..... 291
California Mg. & Development Co., Cal.. 134, 135, 295, 414, 698
California Mg. Co., Utah.....418, 457, 1,061
California & New York Oil Co., Cal.... 936
California Stock & Oil Exchange..99, 458, 622
California University..... 617
Calispell-Summit Mg. Co., Wash..... 371
Callahan Creek Copper Discovery, Mont.1,021
Callahan, Henry C.....1,057
Callow, Frank P.....1,057
Callow, J. M..... 173
Calumet & Arizona Mg. Co., Ariz..10, 94, 174, 179, 214, 255, 374, 975, 1,056
Calumet & Bisbee Development Co., Ariz. 214
Calumet & British Columbia Gold Mines, B. C..... 856
Calumet & Cochise Development Co., Ariz. 214
Calumet & Hecla Mg. Co., Mich..176, 178, 216, 256, 298, 376, 456, 537, 620, 661, 740, 821, 863, 940, 981, 1,060
Calumet Mine Cal.....533, 1,059
Calumet Mg. & Milling Co., S. D..... 862
Calumet & Pittsburg Mg. Co., Ariz.134, 179, 975
Calvin, Samuel.....1,018
Cambria Steel Co., Pa..... 858
Cambrian Mine, Nev.....1,022
Cameron Mine, Cal..... 899
Cameron Mine, Pa.....137, 377, 417, 497
Camilla Mine, Colo.....1,020
Camp Bay Mg. Co., Ont.....1,056
Campbell, William..... 453
Camp Bird, Ltd., Colo.....34, 175, 536, 739
Camp Duncan Mine, Nev..... 901
Canada Corundum Co., Ont.....24, 132, 413
Canadian Copper Co.....371, 656
Canadian Engineering Co..... 454
Canadian Exhibition Office, Ottawa..... 171
Canadian Improvement Co..... 738
Canadian Niagara Power Co..... 858
Canadian Rubber Co..... 534
Canadian Smelting Works, B. C....93, 1,017
Canadian Society of Civil Engineers.... 251
Candelaria Mine, Mex..... 736
Canfield Mine, Cal.....174, 980
Canisteo Mg. Co., Minn..... 336
Cape Breton Iron & Steel Co..... 819
Cape Copper Co..... 937
Capel Fans for Coal Mines..... 939
Capital City Gold Mg. Co., S. D..... 417
Capps Mine, N. C..... 662
Captain Glenn Mine, Cal..... 578
Capuzaya Mg. Co., Mex..... 133
Carbonate Mine, Colo..... 416
Carey, M. J..... 576
Cariboo Con. Hydraulic Mg. Co., B. C., 331, 656, 1,017
Cariboo-McKinney Mg. Co., B. C...171, 251
Caribou Mine, Colo.....215, 335
Caribou Oil Co., Cal..... 174
Carisa Mine, Utah..... 700
Carmichael, Henry 658
Carnahan, C. T..... 697
Carnegie Steel Co...101, 140, 141, 181, 220, 262, 341, 413, 534, 939
Carney Coal Co., Wyo..... 701
Carney Mine, Mont..... 136
Caro, Phillip 1,057
Carpenter, A. B.....533, 938
Carpenter & Carpenter..... 979
Carpenter, F. R..... 978
Carpenter Mine, Mont..... 257
Carrera, J. C..... 938
Carribeau-Montezuma Mg. Co., Colo.... 376
Carrizal Mine, Mex.....1,056
Carson, Arthur 1,057
Cartan, M. J.....617, 697
Carter, T. Lane..... 979
Carter, W. E. H.....1,056
Cartwright Oil Co., Tex..... 662
Cary, J. S..... 453
Cary, R. J..... 453
Casco Mg. Co., Colo..... 739
Case, Allene.....412, 1,057
Case, John J..... 293
Casey Mine, Cal..... 578
Cashier Gold Mg. & Reduction Co., Colo. 136, 215, 335, 739
Casmalia Mg. Co., Cal..... 940
Caspian Mine, Mich..... 176
Cassiar District Mining, B. C..... 211
Castner-Kellner Alkali Co..... 825
Cataract Copper Mg. Co., Mont...581. 982, 1,060
Catherine Lead Co., Mo.....14, 216
Catlin, R. M..... 373
Cauca Valley Con. Mg. Co., Colombia.. 616
Caulkins Mine, Cal..... 659
Cauvery Falls Electric Powder Plant, India 454
Cavan Mg. & Milling Co., Cal..... 375
Cedar Valley Mg. Co., Ariz..... 779
Centennial-Eureka Mg. Co., Utah..... 498
Centennial Mine, Colo..... 415
Centennial Mg. Co., Mich..178, 216, 256, 298, 376, 458, 537, 740, 821, 940, 1,060
Centennial Mg. Co., S. D..... 941
Central Bonding Co., Colo..... 981
Central Con. Mg. Co., Cal.....95, 334, 579
Central Eureka Mg. Co., Cal..295, 334, 414, 899, 989
Central of Georgia Railway..... 623
Central of Georgia Railway vs. Galloway Coal Co.....784, 823
Central Lead Co., Mo..14, 97, 136, 296, 456, 581
Central Mine, Queensland.....617, 657
Central Mg. Co., Mex.....737, 1,017
Central Pacific Railroad..... 451
Central Phosphate Mg. Co., S. C...585, 787
Centurian Mine, Colo.....455, 699
Century Mg. Co., Utah.....297, 418, 862
Cerro Colorado Mine, Mex..... 696
Cerro de Pasco Copper Mine, Peru..294, 831
Cerro de San Pedro Mine, Mex..... 332
Cerveceria Antioquena Co., Colombia... 616
Chaboya Quicksilver Mine, Cal..... 255
Chalmers, J. A.....332, 493
Chambers, J. J., vs. Great Western Mg. Co., Cal..... 371
Champion Iron Co., Minn..... 860
Champion Mine, Idaho.....256, 936
Champion Mine, Mont..... 177
Champion Mg. Co., Cal.....95, 454
Champion Mg. Co., Mich..298, 338, 376, 456, 497, 620, 661, 781, 821, 900, 981
Champion Mine, Ont.....1,056
Champion Reef Gold Mg. Co., India.... 332
Chandler, Irving A..... 577
Chandler Mine, Minn..... 781
Channing, J. Parke..293, 453, 577, 778, 1,018
Chanute, Octave, Tie-Preserving Plant. 413
Chanute Zinc Co., Kan..... 15
Chaparral Mine, Cal..... 940
Chapin Mine, Mich..... 620
Chapleau Mine, B. C.....1,056
Chapman, E. J..... 333
Chapman, R. H..... 938
Chapman Iron, Coal & Coke Co., Va.... 819
Charleton & Co.....1,057
Charlotte Plains, Pumping, Victoria.... 616
Charmer Mine, B. C..... 291
Charronat Mine, Cal.....1,020
Charters, G..... 373
Chatron, Victor 737
Chase, Edwin E.....253, 818
Chase Mg. Co., Cal.....414, 619
Chatham Copper Co., N. M..... 982
Chauvenet, Regis 818
Checkmate Mine, Idaho.....1,042
Chemical Industry Society..... 373
Chemical Industry Society, New York Section.....533, 697, 858
Chemung-Belmont Mines, Colo..... 981
Cherokee-Lanyon Spelter Co..... 303
Cherokee Mexican Proprietary, Mex.... 212
Cherokee Mine, Cal..... 495
Cherry Creek Mines, B. C.....1,056
Cherry Hill Mg. Co., Cal.....495, 820
Chesapeake & Ohio Railway Co...954, 414, 618, 779, 939
Chester Mine, Idaho..... 580
Chevrillon, Louis.....492, 818, 979
Chewelah Copper King Mg. Co., Wash. 701
Chiapas Mg. Co., Mex..... 576
Chicago Bird's Nest Mg. Co., Colo..... 375
Chicago Jennings Oil Well, La..... 496
Chicago Mg. & Development Co., Mont. 916
Chicago Pneumatic Tool Co., Ill..... 979
Chicago University.....373, 577
Chihuhua, Mex., Smelter for.....371, 709
Chihuahua Mg. Co., Mex..... 372
Child, W. H..... 453
Chillagoe Railroad & Mg. Co., Queensland 532, 897
Chinpewa Mine, Colo..... 215
Chiricahua Development Co., Ariz..... 214
Chloride Mine, Oregon..... 377
Chonchilula Gold Reef Mines Co., Cal.. 201, 255
Chris. Anderson Mine, Cal....295, 414, 738
Christy, S. B..... 979
Chrome Steel Works, N. J..... 738
Chrysolite Mg. Co., Colo.....215, 660
Chuckawala Mg. Co., Cal..... 175
Church, John A..... 293
Church, Seymour R., Co., Cal..... 659
Cienaguito Mg. Co., Mex.....332, 452
Cienfuegos, Palmira & Cruces Railroad & Electric Power Co., Cuba..... 578
Cigarrero Mine, Mex..... 21
Cincinnati, Hamilton & Dayton Railway Co..... 136
Cinco de Mayo Mine, Mex.....133, 856
Cinco Senores Mine, Mex.....292, 532
C. K. & N. Mg. Co., Colo...136, 215, 336, 580, 900
Clairton Steel Co...180, 181, 220, 421, 585, 666, 705, 713, 743
Clara Belle Mg Co., Colo..... 214
Clara Belle Mg. Co., S. D..97, 337, 417, 538
Clarence Mine, Victoria..... 616
Clark, Charles 253
Clark, Dennis 253
Clarke, Frederick P..... 213
Clarke, John M..... 858
Claussen, H. B..... 979
Claxton Mine, Cal..... 374
Claybank Tunnel, Cal.....214, 1,020
Clear Creek Dredging Co., Colo..... 175
Clear Creek & Gilpin Mg. & Tunnel Co., Colo..... 619
Clear Creek Mg. Co., Ala..... 779
Clements, J. Morgan.....373, 777
Cleopatra Copper Co., Cal..... 976
Cleopatra Mg. Co., Ariz..... 174
Cleveland Cliffs Iron Co..176, 216, 296, 891, 860
Cleveland Mine, Colo.....96, 1,020
Cleveland-Pacific Mg. Co., Cal.....535, 698
Cleveland & Pittsburg Mg. Co., Cal.... 375
Cleveland Twist Drill Co., O..... 294
Cliff Mine, Mich.....376, 580
Clift Mine, Colo..... 780
Climax Mine, Cal....95, 454, 495, 619, 659
Clinton Wire Cloth Co., N. Y..... 979
Clio Mine, Cal..... 214
Clipper-Boss Tweed Mine, Mont..... 177
Clipper Mine, Ariz. 939
Clipper Mg. Co., Colo. 780
Cloud City Mine, Colo...455, 535, 699, 1,020
Clover Creek Mg. Co., Cal.....899, 940
Clover Leaf Coal Mg. Co., Ind..... 740
Clover Leaf Mg. Co., S. D....97, 177 297, 581, 621
Cloverdale Quicksilver Mg. Co., Cal.... 899
C. M. & S. Co., Ariz..... 414
Coahuila Coal & Oil Development Co., Mex. 977
Coal Creek Coal Mg. Co., Ind..... 136
Coal Creek Mg. Co., Tenn..... 258
Coalinga Oil-Field, Cal. 174, 414
Coburn, C. H. 697
Cochiti Gold Mg. Co., N. M..... 861
Cockerill, A. B. 132
Cockerill Zinc Co., Mo..... 544
C. O. D. Mine, Ariz..... 534
C. O. D. Mine, Colo.....1,021
Coeur d'Alene District, Idaho..12, 81, 215, 371
Coeur d'Alene Gold Mg. Co., Idaho.... 781
Cohen, Louis 897
Colby Mine, Mich. 1,021
Cold Spring Mine, Cal. 95
Cole Engineering Co., N. J..... 939
Cole, W. L. 858
Coleman, A. P. 896
Coleman, Robert J. 131, 979
Colgate, Abner W. 493
Collins, Edgar 172
Colloseum Mine, Cal. 1,059
Coloma Gold Mg. Co., Mont..... 336
Colombia Gold Mg. & Milling Co., S. D. 97
Colorado Boss Mine, Colo..... 455
Colorado City Ore Dust Treating Plant, Colo. 335
Colorado College 494
Colorado Fuel & Iron Co...37, 211, 377, 415, 695, 700, 981
Colorado Iron Works Co., Colo..132, 534, 577, 735, 979
Colorado Mine, Ariz. 1,019
Colorado Nitrate Co., Chile.....381, 422
Colorado & Northwestern Railroad..... 815
Colorado River Gold & Copper Co., Cal. 295, 335, 375
Colorado Scientific Society.....293, 855
Colorado Smeltermen's Union 291
Colorado Society of U. S. Deputy Mineral Surveyors 615
Colorado State School of Mines..331, 577, 853, 935, 975
Colorado State Teachers' Association... 655
Colorado-Tellurium Gold Mg. Co., Colo.. 739
Colorado & Wyoming Development Co., Colo. 296, 1,058
Columbia Lead Co., Mo..... 14
Columbia Mine, Mont. 1,021
Columbia Mine, Oregon.....491, 497, 901
Columbia Quarry, Cal. 415
Columbia University 253, 979, 1,015
Columbus Con. Mg. Co., S. D...45, 538, 901
Columbus Con. Mg. Co., Utah..97, 297, 337, 538, 862, 901, 983, 1,061
Coma Mine, Colo. 899
Comanja Iron Smelter, Mex. 411
Combination Mine, Nev...457, 537, 581, 661, 901
Comet Hill Mine, Cal. 534
Commonwealth Mg. & Milling Co., Ariz. 36, 134
Compensation Mine, Idaho 1,067
Compressed Air Machinery Co., Cal.... 534
Compton, Claude 658
Comstock Mine, Colo. 820
Comstock Mg. & Milling Co., Oregon... 977
Comstock Tunnel Co., Nev..... 419
Conant, H. D. 493
Condor Water & Power Co., Oregon.... 337
Cone Dredging Land, Cal. 371
Condra, G. E. 1,057
Conely, E. B. 858
Confidence Mine, Cal. 95, 859
Congress Gold Mg. Co., Ariz..34, 36, 618, 999
Connell, J. M. 778
Connelly, W. 1,057
Connor's Bonanza Mine, Colo..... 136
Consolidated Blue Gravel Mg. Co., Cal.. 859
Consolidated California & Virginia Mg. Co., Nev. 44
Consolidated Coal Co., Ill 981
Consolidated Copper-Gold Mg. & Milling Co., Colo. 975
Consolidated Fremont Mg. Co., Cal.....1,019
Consolidated Gem Mines Co., Colo..96, 535, 780
Consolidated Golden Trout Mg. Co. vs. George D. Barber 936
Consolidated Goldfields Co., N. Z..... 493
Consolidated Kent Collieries, Ltd., Eng. 736
Consolidated Lake Superior Co..738, 783, 815
Consolidated Mercur Gold Mg. Co., Utah 43, 98, 378, 418, 1,061
Consolidated Mines of St. Louis, Ariz.. 534
Consolidated Mg. Co., Colombia 616
Consolidated Nickel Mines, New Caledonia 20
Consolidated Stock & Petroleum Exchange 983
Consolidation Coal Co., Md.....496, 497
Constitution Mine, Idaho 336
Consuelo Mine, Mex.....776, 937
Consumers' Ore Co., Minn..... 296
Contact Mine, N. M. 662
Contention Mine, Cal.....780, 820
Continental-Alta Mine, Utah 137, 901
Continental Electric Power & Irrigation Co., Colo. 415
Continental Gold & Copper Co., Cal.... 619
Continental Mine, Idaho 93
Conwey Placer Mg. Co., Mont.615, 690, 1,055
Cook, Adam, Sons, N. Y.....294, 1,019
Cooke-Fisk and Gregory Bobtain Consolidation, Colo. 415, 859
Cook, Frank B..... 493
Cooley, Mortimer E. 333
Cooper Mine, Oregon 497
Co-operative Mg. Co., Cal.....1,020
Copia Mg. Co., Cal..... 135
Copiano Mg. Co., Chile..... 94
Copper Butte Mine, Ariz..... 454
Copper Canyon Mine, B. C..... 498
Copper Chesney Mine 657
Copper Glance Mine, Ariz..... 975
Copper Hill Mine, Mont..... 861
Copper King Mine, B. C.....291, 856
Copper King, Ltd., Cal..... 738
Copper King Mine, Colo..... 699
Copper Mountain Mg. Co., Mont...700, 901
Copper Mountain Mg. & Milling Co., Utah 97, 217
Copper Mystery Mine, Colo..... 495
Copper Prince Con. Mg. Co., Utah..... 297
Copper Queen Con. Mg. Co., Ariz..10, 178, 374, 578, 618, 975
Copper Range Con. Mg. Co., Mich..... 741
Copperopolis Mine, Oregon 417
Cora May Mine, Colo..... 739
Corbin District, Mont. 251
Corbin Mg. Co., Mont..... 257
Cordova Mine, Cal.....739, 780
Corinth Engine & Boiler Works, Miss., 294, 578
Corning, F. G..... 533
Cornish, Thomas 212
Cornucopia Mg. Co., Oregon..... 137
Corona Gold Mg. Co., Colo..... 981
Coronado-Penrose Mine, Colo..... 455
Corrigan, McKinney & Co..220, 296, 376, 821
Cosmopolitan Mine, W. A..... 292
Cottonwood Creek Gold Dredging, Cal., 659, 735
Cougar Mine, Oregon.....976, 982
Couldrey, P. S.....818, 1,018
Countryman, T. R..... 493
Courey Placer Mg. Co., Mont..... 217
Cousin, A. B. 493
Cove Mine, Idaho 620
Coventry, Frank L. 131
Coverdale, W. H., & Co., N. Y..... 374
Cow Creek Mg. Co., Oregon..... 861
Cowan, F. C..... 373
Cox, S. Herbert..... 453
Cracker Jack Mine, Ariz.....779, 898
Cracker Jack Mine, Idaho....136, 256, 336, 416
Cracker-Oregon Mine, Oregon 621
Craig, J. W.....131, 818
Craigiemore Mine, W. A..... 492
Cramp Steel Co., Ont..... 371
Crandall Packing Co., N. Y..... 334
Crane Gulch Placers, Oregon..... 816
Cranford Coal Co., Ala..... 339
Cranston Mg. Co., Cal..... 175
Crawford, Henry E.....533, 617, 897
Creede Ore Shipments, Colo..... 39
Creel, Enrique C. 371
Creel, Enrique C., Proposed Smelter for Chihuahua, Mex. 776
Cremer, F. 412, 533
Crescent Coal Mg. Co., Wash..... 942
Creswell, J. H. 897
Cripple Creek & Colorado Gold Mg. Co., Colo. 820
Cripple Creek Con. Mg. Co., Colo..... 860
Cripple Creek Cyanide Mills, Colo..... 739
Cripple Creek District Mine Owners' and Operators' Association 695
Cripple Creek Drainage Tunnel, Colo. 38, 40, 96, 256, 615
Cripple Creek Enterprise Gold Mg. Co., Colo. 96, 820, 860
Cripple Creek Homestake Gold Mg. Co., Colo. 376, 536
Cripple Creek Mine Owners and Operators Association 411, 451
Croasdale, Stuart 897
Crocker-Wheeler Co., N. J...374, 618, 698, 1,058
Croesus Mg. Co., Cal..... 335
Croff Mine, Cal. 294
Crofton Smelter, B. C..... 816
Croll, H. V. 778
Cross, Philip 453
Crowl Creek Copper Mines, N. S. W., 493, 657
Crown Deep Mg. Co., Cal.....135, 1,059
Crown King Mine, B. C.....133, 532
Crown Mountain Gold Mg. Co., Ga.... 900
Crow's Nest Pass Coal Co., B. C...133, 171, 218, 291, 331, 977, 1,017
Croxton Mine, Mich. 1,060
Croydon Mine, W. A.....492, 657
Croze, W. W. J..... 979
Crucible Steel Co. of America..... 173
Crysler, Charles 371
Crystal Lake Mg. Co., Cal..... 375
Crystal Marble Co., Wash..... 976
Crystal River, Fla., Proposed Shipping Port for 263
Crystal Salt Co., Utah..... 585
Crystal Water Co., Nev..... 258
Cuapillo Mine, Mex. 736
Cuba Mg. & Milling Co., Mex..... 411
Cuff Mine, Mich. 416
Culbert, M. T. 896
Culbertson Mine, Cal. 214
Cumberland Gold Mg. Co., S. D..... 258
Cumberland Mine, W. A..... 777
Cummings, W. L. 1,057
Cummings Coal Co., Ind.....1,021
Cummins, H. Oren 577
Cummins, Leon 897
Cundy, James H. 91
Cunliffe Mine, Cal. 819
Cupel Mine, Ariz.' 659
Curle, J. H.....91, 134, 253, 412, 453, 577
Custer Mine, Mont. 456
Custer Peak Mg. Co., S. D.....941, 1,022
Cuyamaca Ranch & Mg. Co., Cal..... 698

D

Daggett, Ellsworth 493, 1,018
Dahlonega Gold Mg. & Milling Co., Ga. 821, 900
Dairy Farm Mine, Cal..... 980
Dakota Mg. Co., Mont..... 217
Dakota Mg. & Milling Co., S. D..97, 538, 941, 1,061
Dale District, Cal. 1,020
Daly, Herbert J. 533

Daly, John J. 293
Daly-Judge Mg. Co., Utah....178, 337, 538
Daly Mg. Co., Utah 538
Daly-West Mg. Co., Utah.....42, 217, 337, 539, 581, 741, 783, 822, 1,022
Damours Gold Mg. & Milling Co., Mont. 782
Danforth, A. H..... 453
Dark Horse Mine, Mont.....1,060
Darling Mine, Cal. 899
Darnell Mg. & Milling Co., Wash..... 701
Davenport Locomotive Works, Iowa, 374, 778
Davenport, Russell Wheeler 413
Davidov, Isidor 131, 212, 493
Davidov, W. 131
Davidson, T. W. 577
Davies, E. Henry 493
Davis, A. W., vs. Julian Con. Gold Mg. Co., Cal. 211
Davis, Britton 697
Davis Calyx Drill Co., N. Y..... 939
Davis, C. S. 938
Davis, F. M., Iron Works..... 132
Davis-Gebhardt Mine, Utah 581, 901
Davis, W. M. 737
Daw, John W. 697
Dawn of Hope Mine, Cal.....1,020
Dawson, T. L. 818
Dayton Globe Iron Works, O. 334
Dayton Oil Field, Texas 862
Dayton, Thaddeus S. 91
Deadwood Mine, Cal. 214
Deadwood-Standard Gold Mg. Co., S. D., 97, 297, 457
Dean, A. L..... 131
Doane-Rambler Mine, Wyo.....41, 862
Death Valley Borax Co., Cal.....1,058
Death Valley Gold Discoveries, Cal..... 980
Deavitt, H. M.....131, 1,018
Decatur Gold Mg., Milling & Tunnel Co., Colo. 899
Decker, Rudolph J. 697
Defender Mine, Cal.....374, 859, 980
Defty, W. E.....212, 253, 978
De La Mar, J. R..... 253
De La Mar Mine, Ariz..... 414
De Lamar Mg. & Sm. Co., Cal..... 95
De Lashmutt, Ivan 533
Delaware & Hudson Co.....137, 337, 377
Delaware, Lackawanna & Western Railroad Co. 377, 497, 1,061
Della Mountain Mg. Co., Idaho.....1,007
Del Mar, Algernon 91 373
Delmatia Mine, Cal. 95
Delmonico Gold Mg. Co., Colo..... 535
Del Monte Mg. Co., Cal..95, 134, 334, 374, 495, 738
Del Rio Mine, Idaho 456
Delta Con. Gold Mines Co., Cal....214, 495
Delta Mine, Idaho..... 96
Denbigh Mine, Colo. 495
Dennis, Francis J. 412
Dennis Mine, Colo. 215
Dennis, Thomas 213, 533
Denny, G. A. 897
Denny, H. S. 858
Densmore Mine, Cal. 214
Denver Engineering Works Co., Colo., 819, 1,058
Denver-Leadville Tunnel, Tramming & Mg. Co., Colo. 256
Denver Mine, Colo, ... 739
Denver Mine, Mex. 856
Denver Mine, Mont. 177
Denver Mint Building, Colo. 775
Denver, North Western & Pacific Railroad 371, 695, 815
Denver Ore Testing & Sampling Co., Colo. 980
Denver Tramway Power Co., Colo..... 333
Denver & Southwestern Railway Co....1,055
De Remer Water Wheel Co., Colo..... 254
Derigo Mine, Colo. 495
Desloge Lead Co., Mo.....14, 821
Dessau, Simon 91
Detroit Copper Mg. Co., Ariz..178, 452. 1,019
Deutscher Bund Mine, Cal..... 375
Devereux, Henry 697
Devereux, Horace K. 697, 979
Devereux, W. B.....493, 658, 778
Dewey & Lockhart, Mex. 617
Dewey Mg. Co., Wash.....451, 741
Dewey Mine, Colo. 739
Dewey Mg. Co., Idaho.....336, 456, 699
Dexter Mine, Nev. 861
Dexter Mg. Co., Colo.....416, 620
Diamond Chief Mg. Co., Idaho..... 660
Diamond Gold Mines Co., Colo....375, 496, 579, 619, 820, 1,059
Diamond Hill Mine, Cal.....334, 375, 454
Diamond Joe Mine, Colo.....1,059
Dieffenbach, H. M. 173, 332, 776
Dignowity, C. L. 1,057
Dillon Mine, Colo. 580
Dios de Guia Mine, Mex..... 372
Dividend Mg. Co., Ariz... 174
Dividend Oil Co., Texas 782
Dives-Pelican Mine, Colo. 175
Dixon, Joseph, Crucible Co., N. J..578, 738, 979
Dober Mine, Mich. 176
Doble, Abner Co., Cal..... 979
Doble, Robert McF. 979
Doctor-Jack Pot Mg. Co., Colo.....136, 620
Doctor Mine, Oregon 1,061
Dodge, William E. 178
Dodgeville Sm. & Milling Co., Wis..... 458
Doerr, Edward 172, 373, 533 697
Doe Run Lead Co., Mo..... 14
Doland Mine, Cal. 135
Dolcoath Tin Mg. Co., Cornwall..... 696
Dolores Mg. & Milling Co., Mex...292, 332
Dolores Trumpeta Mine, Mex..... 332
Domingo Mine, Colo. 415
Dominion Coal Co., N. S..98, 413, 418, 741, 864, 1,062
Dominion Copper Co., B. C..... 371
Dominion Dump Car Co., Ont..... 173
Dominion Gold Mg. Co., Ont..... 936
Dominion Iron & Steel Co., N. S..107, 491, 534, 737, 738, 895, 942, 1,016
Dominion Mine, B. C..... 251
Dona Luisa Mine, Mex..... 576
Donaldson, John A. 778
Donkin, Hiram 131
Donnelly Mine, B. C..... 817
Don Pedro Mine, B. C..... 133
Don Pedro Mine, Cal.....95, 859
Doolittle, C. H. 212
Doolittle Mine, Cal. 495
Dora-Daisy Lode, Colo. 579
Doerffel, Ernst D..... 938
Dorleska Mine, Cal. 940
Dorman, Long & Co., Eng..... 937
Dos Cabezas Mine, Mex.....1,056
Dos Estrellas Mine, Mex..... 372
Double Eagle Mine, Colo..... 335
Douglas, James 293
Douglas, Lacey & Co., N. Y.....255, 491
Douglas Mine, Idaho 176, 981
Douglas Mg. Co., Cal..... 334
Dow Chemical Co., Mich..... 56
Dowlen, Walton E. 453, 533
Doyle Gravel Mine, Cal.....1,020
Doyle, James, vs. Battle Mountain Gold Mining Co., Colo. 1,015
Doyle Ranch Mine, Cal. 859
Drake, Francis 1,057
Drake & Stratton Co., Minn.....781, 941
Draper Mine, Cal. 859, 1,020
Dressel, A. F. 91
Droeg Bros. Mine, Cal.....1,059
Dryer, Ervin 697
Duane, James 938
Dudley J. 293
Dudley, Uriah 737
Duesler, Wm. B. 778
Duffield, M. S. 131
Dufourcq, Edw. L. 658, 938
Duluth & Iron Range Railroad..... 257
Duluth & Chiricahua Development Co., Ariz. 975
Duluth & Iron Range Railroad..... 975
Duluth & Superior Iron & Steel Co..... 216
Duncan, David J. 131
Dundee Mine, B. C. 172
Dunham, Smith & Reid 212
Dunham, William P. 737
Dunkin Mg. Co., Colo..... 295
Dunn Bros. Mine, Cal.....1,020
Dunn Mine, Cal. 135, 1,058
Dunn Mine, Mich. 336
Dunn, William A. 373
Dunnellon Phosphate Co., Fla.....381. 745
Dunsford, Frank 372
Dupont International Powder Co....57, 291, 422, 1,026
Dupont Powder Co., Del..... 776
Duquesne Mg. Co., Mont.....417, 822
Durand, T. J., vs. Karma Mg. Co., Cal. 171
Durell, C. T. 1,057
Dutch Flat Golden Drift Mine, Cal..... 899
Dwight, Arthur S. 617
Dwight Furnace Co., Mex..... 372
Dwyer, Walter 293
Dymock, John S. 858

E

Eagan, Charles E..... 978
Eagle Bird Mine, Cal. 95
Eagle & Blue Bell Mine, Utah..... 498
Eagle Shawmut Mg. Co., Cal..... 95
Earls, Fred A. 131
Earnshaw Mine, Mex. 1,056
East Calhoun Mine, Colo..... 780
East Dewey Mine, Idaho..... 215
East Greta Coal Mine..... 172
East Helena Smelter, Mont..... 417
East Hiawatha Mine, Mont..... 456
East Norrie Mine, Mich..... 821
East Notaway Mine, Colo..... 899
East Orleans Mine, Cal..... 859
East Pacific Mine, Mont.....456, 1,060
East Pine Knot Mine, Pa..... 740
East Whiting Mine, Colo..... 535
Eastern Oregon Development Co.....1,056
Eastern Steel Co., Pa..... 898
Eastern Township Mg. & Sm. Co., Ont. 591
Easton Mine, Mont. 217
Eccles, S. W. 815, 818
Echo Bend District, Cal. 375
Echo Gold Mg. Co., S. D.....1,022
Eclipse-Argo Mg. Co., Mont..... 456
Eclipse Mine, Cal..... 454
Eddy Mine, Cal. 454
Ede, J. A. 697
Edenborn, William 744
Edgar Thomson Steel Works, Pa..... 141
Edison Explorations in Sudbury Nickel District 14
Edmonds, John 577
Edmonds, Richard H..... 658
Edward F. Mg. Co., Mont.....1,021
Edwards, Thomas 91
E. & E. Mine, Oregon..... 491
E. F. C. Mine, Colo..... 416
Egyptian Mine, Colo. 535
Eiler, Anton 858
Eilers, Karl 815, 818
El Almeden Mine, Mex..... 94
El Cerro Mines, Colombia..... 492
Eldora Chlorination Mill, Colo..... 375
El Dorado Copper Mg. Co., Cal....334, 619, 738
El Dorado Mine, Ariz..... 898
Eldorado Mg. Co., Colo..... 981
Electric No. 2 Dredge, N. Z..... 658
Electro-Peat-Coal Co., Ltd., England... 777
Eleventh Hour Mine, S. D..... 417
Elftman, A. H. 412, 737
El Fuerte River Hydraulic Plant, Mex. 253
Eliza Jane Mine, Cal..... 738
Elizabeth Mine, Cal. 899
Elkhart Mine, Ariz. 374
Elkhorn District, Utah 1,061
Elkhorn Mine, B. C.....133, 1,062
Elkhorn Queen Mine, Mont. 901
Elkton Con. Gold Mg. Co., Colo....376, 699
Ella Beeler Mine, Colo..... 859
Ella Gold Mines Co., Colo.....176, 739
Ellingwood, Charles O. 91
Elliott, W. W..... 213
Elliptic Mg. Co., S. D..... 581
Ellsworth Coal Co., Pa.....258, 377
El Moro Mine, Mex..... 736
Elm River Mg. Co., Mich.....376, 456
Elmore vs. Kneebone 896
Elmore Mine, Cal. 415
El Oro Con. Mg. Co., Mex..... 292
El Oro Mine, Cal.....174, 535
El Oro Mg. & Railway Co., Mex...22, 538, 817
El Paso Con. Gold Mg. Co., Colo..496. 536, 820, 900
El Rico Mg. Co., Cal..... 980
El Roy Mine, Mex..... 532
Elsie A. Mine, Cal.....214, 295, 414
Elwood Tin Workers Mg. Co., B. C....1,017
Elyria Engine Co., O..... 658
Emerick, Charles E. 131
Emery, William O.....577, 858
Emigrant Hill Mine, Cal..... 495
Emma Con. Mg. Co., Cal..95, 819, 939, 1,020
Emma Mine, B. C..... 576
Emma Mine, Oregon 782
Emmett Mine, Colo..... 660
Emmons, S. F.....212, 938
Emperor Mine, W. A..... 212
Empire Con. Mg. Co., Nev..... 661
Empire Dredging Co., Oregon..... 728
Empire Flat Mine, Ariz..... 494
Empire Gold Mines, Ltd., Cal..221. 454, 936
Empire Mine, Mont. 901, 982
Empire Sm. Co., Ariz.....214, 534
Empire State Gold Mg. Co., Colo..256, 297, 499
Empire State Gold Mg. Co., S. D..... 417
Empire State Idaho vs. Bunker Hill and Sullivan Mg. & Concentrating Co..976
Empire State-Idaho Mg. & Dev. Co. vs. K. J. Hanley 451
Empire Tunnel Co., Colo..... 135
Encinitas Copper Co., Cal..... 175
Engelhardt, E. C..... 493
Engineering Co. of America.....1,019
Enock, C. R. 131
Enterprise Mine, Ariz.....374, 414, 980
Enterprise Mine, B. C..... 616
Enterprise Mine, Cal. 579
Enterprise Mg. & Reduction Co., Colo., 660, 699, 1,020
E. P. U. Mine, B. C.....1,062
Erie Copper Co., Utah..... 418
Erman, J. C..... 577
Frnst, George 897
Erskine, J. M., Mexican Mine Purchase 94
Eshenshade, E. E..... 818
Esmeralda Gold Mg. & Milling Co., Mex. 332, 1,056
Esmeralda Mine, Colo. 335
Esperanza, Ltd., Mex.....172, 902
Esselstyn, J. N. 373
Ethel May Gold Mining Syndicate, Mont. 1,021
Ethel Mine, Cal. 95, 295
Ethelyn Mg. Co., Cal..... 940
Etowah Gold Mg. Co., Ga.....215
Eureka & Excelsior Mine, Oregon...217, 901
Eureka Lighting Co., Cal..... 451
Eureka Mine, Cal.....455, 491, 780, 899
Eureka Mine, Oregon 337
Eureka Mg. Co., Idaho..... 981
Eureka-Pacific Placer Mg. Co., Idaho... 576
Eureka Slate Co., Cal..... 738
Eva Mine, B. C.....133, 251, 696, 856
Evans, J. Bowen 173, 1,018
Evansville & Ohio River Coal Mg. Co., Ind. 661, 900
Eveland, A. J..... 131
Everett, Edward 173
Everett Mine, Wash. 98
Evergreen Gold & Copper Mines Co., Colo. 495
Evolution Mine, Colo. 661
Evolution Mine, Idaho 580, 860
Ewing, William B. 251, 291
Exchequer Mg. Co., Cal..... 698
Exeter Machine Co., Pa.....1,019
Expansion Mine, Colo. 660
Exploration Assets Co. 292
Exploration Co. 292
Extreme Gold Mg. & Milling Co., S. D., 97, 862, 982, 1,022

F

Fairbairn, Alan J. 658, 938
Fairbanks, Morse & Co.....374, 454, 1,019
Fairbault, E. R..... 293
Fairchild, O. H.....778, 938
Fairfield Mg. Co., Colo..... 295
Fairview Mine, S. D..... 862
Fairview Mg. Co., Cal....135, 375, 779, 859, 1,059
Faithful-Surprise Mine, Wash.....1,022
Fannin Oil Co., Texas..... 137
Farish, Fred G. 131
Farish, John B.....373, 493, 658
Farish, William A.....253, 493, 617
Farrell Mine, Cal. 414
Favorite Mine, Colo. 335, 535
Favorite Mine, Wash. 217
Fay, A. H. 453
Fay & Yawkey Explorations, Mich..... 416
Fearn, Percy L.....91, 777, 978
Fearnot Mg. & Milling Co., Cal...619, 1,020
Federal Copper Co., Texas..... 942
Federal Lead Co.....11, 14, 494
Federal Loan Mine, Cal.....334, 980
Federal Mines Co., Colo..... 96
Federal Mg. & Sm. Co....331, 371, 496, 902, 943
Fee, Thomas A., vs. W. J. Turner..... 896
Felicidad Asphalt Claim, Venezuela.... 218
Fell, E. Nelson 212
Fentress Mine, N. C..... 457
Ferguson, Edmund Morewood 1,057
Ferland, C. 173
Fernie Coal Mine Disaster Investigation 1,056
Fern Mill, B. C..... 776
Fernandez Mine, Cal. 214
Ferrier, W. F. 533
Ferris-Haggarty Mine, Wyo..... 40
Fetterman Mine, Nev. 1,022
Fielding, C. W. 897
Fielding, Frank E.....173, 333
Finch, J. A. 253
Findley Gold Mg. Co., Colo.....96, 215, 296
Finlay, J. R. 373, 577
Finley & Johnson Mine, Cal.....535, 779
Fire Mountain Gold Discovery, B. C...1,056
Fischer, George K. 897
Fisher, Wm. F. 172, 453
Fisher Maiden Mine, B. C..... 452
Fitzgerald, Thomas F. M..... 131
Fitzhugh Mine, Colo. 295
Five Metals Mg. Co., B. C..... 817
Five O'Clock Mine, Colo..... 335
Flamioflame Mg. Co., Cal..... 334
Fleecer Mountain Gold Discovery, Mont..1,060
Fleiss Mine, Colo. 295
Fleming, J. B. 533
Fletcher Mg. Co., Cal.....940, 1,059
Flood, F. H. 617
Florence & Cripple Creek Railroad, Colo. 371, 411, 860
Florence Mine, Nev. 740
Flynn, C. B. 777
Foghorn Mine, B. C..... 251
Folger, B. 132
Folsom Development Co., Cal.....291, 619
Forbes, Donald G. 213
Ford Bros. Cyanide Plant, Idaho.....1,016
Ford Mine, Cal. 659
Forest City Mine, Colo..... 135
Forest City, No. 2, Mine, Colo..... 579
Forest Mine, Minn. 975
Forest Queen Mine, Colo.....256, 780
Fort Branch Coal Mining, Ind..... 940
Forstner, W. 91
Fort Gough Mine, Cal..... 455
Fort Logan Mine, Colo..... 295
Fortuna Mine, Ariz. 35, 1,019
Fortuna Mg. Co., Mex..... 736
Fortuna Mg. Co., Utah..... 581
Fortune Gold Mg. Co., Colo..135, 335, 660, 820
Fortune Mg. & Sm. Co., Oregon.....1,060
Forty-Nine Mine, Cal. 334, 738
Foster, Philip L.....212, 658
Foster, Thomas 411
Fostoria Gold Mg. Co., Colo..... 96
Fountain Springs Stamp Mill, Cal..... 334
Four B's Mg. Co., Colo..... 415
Fowler, Frank B. 212, 818
Fowler, J. C. 818
Fox, John 293, 412
Frank, Alfred 575, 615
Franklin Mine, Idaho....215, 456, 576 580, 821
Franklin Mg. Co., Mich..216, 338, 456, 537, 620, 740, 781, 900, 940, 981
Fraser, David R. 938
Fraser River Gold Dredging Co., B. C., 776, 856
Frazer Mill, Cal..... 96
Frecheville, R. J. 617, 858
Frecheville, William 332
Free Coinage Gold Mg. Co., Colo..... 376
Free Gold Mg. Co., Cal.....619, 695, 1,020
Free Lance Mine, Cal. 980
Free Piston Gas Engine Co., Mich....1,058
Freeborough Mine, Cal. 660
Freedom Mine, Colo. 215
Freeland, Francis T. 212
Freeland, Pa., Mining & Mechanical Institute 1,018
Fremont Con. Gold Mg. Co., Cal...214, 775, 816, 819, 855, 899
Fremont Peak Mineral Properties, Cal.. 451
Fremont Power & Canal Co., Neb..... 374
French Gulch District, Mont. 620
French Gulch Dredging Co., Mont..... 900
French Gulch Miners' Union 855
Frenier, J. H., & Son, Vt..... 254
Frenzel, A. B. 577, 658
Frick, H. C., Coke Co., Pa.....97, 260, 662
Friday Gold Mg. Co., Idaho.....1,042
Friedensville Zinc Land Sale, Pa..... 621
Friedrichshall Potash Co., Germany.... 625
Frontenac Mine, Ont. 735
Frontino & Bolivia Mg. Co., Colombia.. 492
Fryar, J. W. 777
Fryer Hill Mines Co., Colo...96, 295, 535, 579, 699, 859
Fuerst Bros. & Co., N. Y..... 373
Fuller, W. P., & Co., Cal..... 659
Fulton Oil Co., Cal..... 375
Funeral Range Mining, Cal.....1,058
Furber, P. N. 938

G

Gabriac, Comte de 858
Gadton Ridge Gold Mines, Cal..... 936
Gagze Mine, Cal. 174
Galena Mine, Cal. 579
Galena Gulch Mine, Mont. 982
Galena Mine, Mont. 982
Galice Con. Mg. Co., Oregon.....497, 861
Gallagher Mine, Colo. 579
Galloway Coal & Coke Co., Ala....219, 339, 623
Galloway Coal Co. vs. Central Railway of Georgia 784, 823
Gallymont Gold-fields Co., N. S. W..... 31
Galtz, Theodore 697
Gambetta Mine, Cal. 779
Gambrinus Mine, Cal....659, 739, 779, 980, 1,020
Garcia Mine, Ariz. 414
Garde, Alfred C. 1,018
Garden City Mg. Co., S. D..... 457
Gardiner, Worthen & Goss Co., Ariz... 615
Gardner, B. M. 534
Garfield Mine, Cal. 95
Garibaldi Mine, Cal. 295, 495

Garland, M., Co., Mich. 294
Garlock Mine, Cal. 899
Garrett Coal Co., Pa. 662
Garrettson Springs Mines, Cal. 1,020
Garrison, F. Lynwood 172, 737
Garthwaite, E. H. 131, 493
Garvey Bar Dredger, Cal. 455
Gates, Philetus W. 493
Gavilanes Mine, Mex. 776
Gaylord, B., & Son, Cal. 619
Gaylord, Burdon 91
Gaylord, Ernest 1,057
Geddes, C. W. 697
Gee, Emerson 253
Gem Mfg. Co. 92
Gem Mine, Ariz. 374
Gem Mine, Oregon 782
Gemini Mg. Co., Utah 498
Gemmell, Robert C. 131
General Chemical Co. 57, 262, 342, 1,058
General Electric Co. 24, 373, 576, 698, 778
General Mining & Finance Co. 533
General Shafter Mine, Mont. 581
Genoa Iron Co., Minn. 257
Geological Society of America 91, 93, 97
George, S. W. 858
George, W. H. H. 897
Gerald Mine, Nev. 901
German Mine, Colo. 981
German Nitrate Co., Chile 625
German Ridge Mine, Cal. 659
Germania Mine, Mont. 377
Gertrude Mg. Co., Cal. 295, 1,020
Geyman Mg. Co., Mont. 457, 661
Giant Mg. Co., B. C. 259, 701
Gibbs, Bright & Co. vs. Lake George Mines 777, 817
Gibbs Engineering & Mfg. Co., N. Y., 91, 132
Gibbs, William E. 577
Gilbert, Frederick C. 858
Gillett Mill, Colo. 580
Gilmore Mg. Co., Idaho 1,059
Gilpin-American Mines Co., Colo. 739
Gilpin & Coaley Mine, Colo. 175
Gilpin County Shipments, Colo. 780, 939
Gilpin King Mine, Colo. 940
Gilt Edge Maid Mg. Co., S. D. 662, 862, 982, 1,061
Gilt Edge Mine, Colo. 215, 415
Gimlet Creek Mg. & Milling Co., S. D. 862
Gippsland Coal Production, Victoria 657
Gipson Ranch, Cal. 819
Giroux, J. L. 658
Gladstone Mine, Ariz. 414
Gladstone Mine, Cal. 93, 95, 171, 214, 411, 455
Glasser, C. H. 577
Glazier Mine, Cal. 135
Gleim, Fritz 412
Gleisberg, Robert B. 172, 412
Glenn Mine, Cal. 698, 1,058
Globe Gold Mg. Co., S. D. 137
Globe Mine, Cal. 214
Globe Mine, Mich. 537
Gloster Mine, Mont. 822
Gnome Mine, Colo. 699
Goadby, W. H. 493
Godshall, L. D. 332, 453, 858
Golconda Mine, Oregon 137, 782
Gold Belle Mg. & Milling Co., Colo. 660
Gold Blossom Mine, Colo. 1,059
Gold Blossom Mine, Nevada Co., Cal. 698
Gold Blossom Mine, Placer Co., Cal., 698, 899
Gold Bond Mg. Co., Mont. 376
Gold Bug Mine, Oregon 941
Gold Canyon Mine, Cal. 859
Gold Coin Mg. Co., Colo. 900, 940, 1,021
Gold Cord Mine, Colo. 136
Gold Cord Mg. Co., Mont. 982
Gold Creek Mg. Co., Ind. 496
Gold Creek Dredging Co., Mont. 1,060
Gold Crown Mg. Co., Cal. 454
Gold Crown Mg. Co., Colo. 1,059
Gold Cup Mine, B. C. 172, 582
Gold Development Co., Utah. 337, 377
Gold Dirt Mine, Colo. 820, 899
Gold Dust Mine, Idaho 620
Gold Finch Mine, B. C. 212, 1,062
Gold Flint Mine, Idaho 1,060
Gold Hill Mine, Cal. 135
Gold Hill Mg. & Milling Co., Mont., 417, 1,060
Gold Hunter Mine, Idaho. 136, 923, 976, 981
Gold King Con. Mines Co., Colo. 296, 335, 415, 820, 1,020
Gold Leaf Mine, Ariz. 374
Gold Lode Tunnel Co., N. M. 1,022
Gold Mines Co., N. M. 861
Gold Mountain Mine, Ariz. 36
Gold Pan Mg. Co., Colo. 579, 820
Gold Pin Mine, Cal. 619
Gold Quarry Mine, Ariz. 414
Gold Reef Mg. Co., Mont. 97, 1,021
Gold Roads Mg. and Exploration Co., Ariz. 34, 374, 534, 698, 898
Gold Rock Mine, Colo. 619
Gold Rock Mg. Co., Ont. 1,056
Gold Run Gravel Mine, Cal. 495, 899, 1,055
Gold Run Gravels, Ltd., vs. Arthur L. Pearce 531
Gold Run Mg. Co., Klondike Litigation 936
Gold Run Mg. & Milling Co., Colo. 136, 496, 981
Gold & Silver Extraction Co., of America 495
Gold Sovereign Mg. & Tunnel Co., Colo. 136, 900
Gold Spur Mine, Cal. 454
Gold Spur Mg. & Milling Co., Colo. 375
Gold Truce Mine, Colo. 296
Gold Tunnel Mine, Cal. 334, 819
Gold Tunnel & Railway Co., Colo. 335
Golden Argus Mg. Co., Cal. 454
Golden Banner Mine, S. D. 982
Golden Chariot Mine, B. C. 936
Golden Chest Mg. Co., Idaho. 1,021
Golden Cloud Mines Co., Colo. 375, 579, 1,020
Golden Crest Mg. Co., S. D. 137, 297, 417, 581, 741, 982
Golden Cross Mg. Co., Cal. 695
Golden Crown Mine, Cal. 819
Golden Curry Mine, Colo. 375, 579, 1,059
Golden Cycle Mg. Co., Colo. 135, 256, 780, 820
Golden Dollar Mine, Colo. 255
Golden Eagle Mine, Cal. 335, 579, 699, 980, 1,020
Golden Eagle Mg. Co., Wash. 97, 258, 338, 538, 662
Golden Empire Mine, S. D. 901, 982
Golden Era Mine, Cal. 175
Golden Fleece Mine, N. Z. 493
Golden Gate Mine, Mont. 257
Golden Gate Mg. Co. vs. V. W. Hupp. 775
Golden Gem Mine, Ariz. 578, 659
Golden Horseshoe Estates Co., W. A. 332, 492, 651, 696, 777, 857, 879
Golden Lily Mine, Colo. 1,020
Golden Reward Mg. Co., S. D. 45, 621
Golden Sceptre Mine, Cal. 940
Golden Smelter, Colo. 1,059
Golden South Mine, Cal. 95
Golden Star Mine, Ont. 531
Golden Star Mg. Corporation, Colo. 1,059
Golden Summit Mine, Cal. 578
Golden-Sunlight Mine, Mont. 581
Golden Sun Mg. & Milling Co., Colo. 1,059
Golden Wedge Mine, Colo. 536, 820
Golden Wedge Mine, Oregon 982
Golden West Mine, B. C. 133, 532
Golden West Mine, Cal. 95, 414, 455, 820, 899
Golden West Mg. Co., S. D. 258, 417
Golden Wizard Mine, Oregon 217
Goldfield Diamond Drilling Co., N. Z. 658
Goldfield District, Nev. 581, 661, 740, 901
Goldfield Water & Milling Co., Nev. 457
Goldschmidt Thermit Co., N. Y. 333
Goldsmith, Leo. 333
Goldsmith Mine, Mont. 42
Goldstake Mine, S. D. 901, 1,061
Gomez Palacio White Lead Works, Mex 212
Goodale, Chas. W. 938
Goodenough, M. J. 979
Good Enough Mine, Cal. 578
Good Hope Mine, Cal. 295
Goodman Mfg. Co. 819
Goodwin Mine, Mont. 457
Gopher-Boulder Mine, Cal. 95, 738, 980
Gopher Mg. Co., S. D. 258
Gordon City Mg. Co., S. D. 581
Gordon, Douglass H. 658
Gordon, Frederick 576
Gorman Mfg. Co., N. Y. 696
Goss, W. F. M. 979
Goubert Mfg. Co., N. Y. 294
Gouyard, G. M. 577, 897, 938
Governor Mine, Colo. 175, 256, 579, 981
Gower, John A. 938
Gower Mines Syndicate, Ltd., Colo. 859
Gow, P. George 1,057
Graceton Coke Works, Pa. 662
Grace, William R. 493
Gracie Mine, Idaho 136
Graham, W. T. 1,026
Gram, F. J. 213
Granby Con. Mg., Sm. & Power Co., B. C. 291, 297, 371, 377, 452, 458, 936
Grand Central Mg. Co., Utah. 783, 823
Grand Mineral Railroad, Mex. 576
Grand Prize Mine, Cal. 980
Granite-Bi-Metallic Mg. Co., Mont. 42
Granite Creek Mines, Mont. 456
Granite State Mines Co., Idaho. 336, 923, 1,042
Grant Gold Mines, Mont. 271, 581
Grant, R. J. 577, 658
Grantz Gold Mg. Co., S. D. 97
Graphic Mine, N. M. 662
Grasselli Chemical Co. 183, 221, 697
Grass Valley Con. Mg. Co. vs. J. M. O'Brien 251
Graves, Jay P. 493, 617
Graves, Walter M. 777
Gray Eagle Mine, Cal. 255
Gray Eagle Mine, Mont. 620
Grayson, John T. 412
Great Australian Quicksilver Mg. Co., N. S. W. 32
Great Berry Mine, W. A. 372
Great Boulder Perseverance Mine. 532, 977
Great Boulder Proprietary Co., W. A. 134, 212, 292, 492, 777, 897, 1,017
Great Britain Mine, Ariz. 494
Great Cobar Copper Syndicate, N. S. W. 172, 252
Great Eastern Mine, Colo. 335
Great Fingall Associated Mines, Ltd., W. A. 332, 411, 657
Great Fingall Con. Mines, W. A. 212, 332, 411, 616, 857, 978
Great Lakes Engineering Works, Mich. 1,019
Great Northern Mine, Oregon. 982
Great Northern Mines, B. C. 212, 452, 936
Great Northern Railroad. 257, 936, 975
Great West Mine, Ariz. 494, 698, 980
Great Western Coal Development & Mg. Co., Wash. 782
Great Western Gold Co., Cal. 95, 899
Great Western Mg. Co. vs. J. J. Chambers 371
Greenback Mine, Nev. 1,056
Greenback Mine, Oregon 417
Green Bay Phosphate Plant, Fla. 263
Greene Con. Copper Co., Mex. 10, 98, 178, 259, 298, 332, 338, 378, 622, 702, 741, 856, 1,062
Greene Con. Gold Co., Mex. 452, 977
Greene, Wilkins M. 253
Greenhorn Gold Mines & Development Co., Oregon 1,060
Greenhorn Mine, Cal. 659
Greenhorn Mine, Colo. 375
Green Mine, Colo. 660
Green Mountain Mine, Cal. 174, 454
Green Mountain Mg. & Milling Co., Colo. 175
Green's Lease, W. A. 292
Gregory-Bobtail and Cook-Fisk Consolidation, Colo. 859
Grey, F. W. 333
Greyhound Mine, Idaho. 496
Grierson, E. S. 453
Griffiths, E. M. 897
Griffiths, J. Norton 818
Griggs, C. C. 533
Grizzly Hill Mine, Cal. 495, 1,020
Grub Stake Mg. Co., Cal. 1,020
Grunter Mine, Idaho 900
Guadalajara, Smelter for. 856
Guadalupe Mine, Cal. 660
Guanacevi District Mining, Mex. 937
Guanajuato Con. Mg. & Milling Co., Mex. 411, 643
Guarisamey Gold Mg. Co., Mex. 291
Gue, T. R. 332
Guertier, Charles R. 412
Guffy Petroleum Co., Tex. 177, 337, 498, 782
Guggenheim Exploration Co. 172, 372, 373, 491, 696, 817, 977, 1,017, 1,056
Guggenheim, Simon 253, 735, 815
Guiterman, Franklin 697
Gulch Mine, Colo. 455, 859
Gum Boot Mine, Cal. 95
Gunn Mine, Cal. 454
Gunnell Gold Mg. & Milling Co., Colo. 495
Gwin Mine Development Co., Cal. 374, 779, 1,020
Gympie District 657

H

Haanel, Ralph 172
Hackberry Mine, Ariz. 980
Hack, E. Barton 293
Hacks Lease, W. A. 897
Hack's Lease, W. A. 292
Hadfield's Steel Foundry Co., Eng. 454, 778
Haines, C. V. 577
Halifax Placer Mg. Co., N. C. 167
Halifax Mg. Co., Nev. 621
Hallaman, Mr. 253
Hallidie-Painter Tramway Co., Cal. 659
Hall Mines, Ltd., B. C. 93, 817, 1,022
Hallstead Mine, Pa. 537
Hamill, William A. 253
Hamilton, J. H., vs. J. C. Kemp Van Ee 695
Hamilton Mine, Cal. 619
Hamilton Mine, Mich. 581
Hamilton, Richard 253, 777
Hamilton Rolling Mills, Ont. 1,056
Hammon Mg. Co., Cal. 415
Hammond, John Hays. 412, 617, 658
Hampton Con. Mines Co., Colo. 135
Hampton Wm. Huntley 938
Hanchett, L. 697
Handspike Mg. Co., Idaho. 1,059
Hanks, Abbot A. 737
Hanley, K. J., vs. Empire State-Idaho Mg. & Dev. Co., Idaho. 451
Hanna, Marcus A. 293
Hanna, M. A., & Co. 296
Hanover Mine, Ariz. 534
Hansell, N. V. 412
Hanson, Rasmus 493
Hansonville District Land Sales, Cal. 780
Happy Four Mine, B. C. 736
Happy Hollow Mine, Cal. 1,059
Happy Hollow Mine, Colo. 335, 739
Hardinge, H. W. 91, 253, 373, 577, 778, 897
Hardman, John E. 173
Hardsocg, Martin. 534, 1,019
Hardy, Eugene A. 412
Hardy, George 172
Hardy, J. Gordon 412
Hardy Mine, Ariz. 659
Hardy Mine, Cal. 95
Harper, N. 577
Harrell, Francis W. 173
Harrell Stamp Mill Co., Tex. 213
Harrisburg Foundry & Machine Co., Pa. 534, 858
Harrison Gulch Titles. 451
Harron, Rickard & McCone, Cal. 254
Hart Gold Mg. Co., Colo. 620
Hartly Mine, Mont. 376
Hart-Parr Co., Iowa. 898
Harvard Mine, Colo. 215, 780, 820
Harvard University 778, 975
Harvey, Alfred 658
Harvey, F. O. 293
Harwick Mine, Pa. 177, 655
Hastings Exploration Syndicate, B. C. 138
Hathaway Mine, Cal. 1,059
Hattie Grant Mine, Idaho. 1,021
Hauraki Gold-Field, N. Z. 857
Havilah Mine, Cal. 95, 255, 899
Hawkeye Mg. & Milling Co., Wash. 701
Hawkins, Edwin N. 172, 373, 938
Hawkins, J. D. 979, 1,018
Hawley-Gardner Mine, Colo. 981
Haycock, John Hilton 412
Hayes, C. W. 453
Hayes, F. J. 737
Hayes Mine, Mich. 376
Hay, Henry 778
Hays Mine, Pa. 901
Hayward, Alvinza 333
Haywood, William D. 815
Hazard Mfg. Co., Pa. 858
Hazard, R. E. 131
Hazel Mg. Co., Cal. 855
Hazleton, S. C. 333
Headwater Gold Mg. Co., Cal. 415, 579, 660
Healy, F. E. 935
Heath Mg. Co., Idaho. 821
Hecla Con. Mg. Co., Mont. 417
Hecla Mg. Co., Idaho. 575, 735
Hedberg Mine, Colo. 175
Heil, Henry, Chemical Co. 92
Heilner, P. B. 737
Heimberger, Jacob O. 935, 938
Heinze, F. Augustus. 575, 615
Heinze Lead & Silver Mg. Co., Idaho. 336
Helen Cloud Mine, Colo. 699
Helen-Harold Tunnel, Colo. 135
Helen Mine, B. C. 1,017
Helen Mine, Ont. 942
Heller, Martin J. 131, 412, 737, 1,057
Helvetia Mine, Ariz. 659
Helvetia Mine, Cal. 375
Hemlock Mine, Mich. 1,021
Hemphill, A. J. 131
Henderson Mg. Co., Mont. 297
Henderson, Robert 1,056
Hendrick Mfg. Co., Pa. 939, 979
Hendrickson, J. F. 532
Hendrie & Bolthoff Mfg. & Supply Co., Colo. 494
Hennige, C. 1,018
Henrietta District, Texas. 337
Henrietta Mine, Colo. 135, 415
Henry Adney Mg. Co., Colo. 136, 416, 619, 702, 860
Hensley Mine, Colo. 660
Hercules-Horseshoe Mine, Cal. 698
Hercules Iron Mines, Mex. 532
Hercules Mine, Idaho. 981, 1,016
Hercules Mine, Wash. 338, 1,022
Herendeen Mfg. Co., N. Y. 1,019
Herman, Hyman 818
Herron, John. 493
Herschmann, Arthur J. 91
Herzig, C. S. 373
Hesperia Gold Discoveries, Cal. 535
Hewett, Foster 412
Hewett, G. C. 412, 697, 1,057
Hewitson, Thomas 737
Hey, Paul. 373
Heyl & Patterson, Pa. 534, 737
Heywood Oil Co., Tex. 782
Heywood, Wm. A. 871
Hidalgo Mill, Mex. 492
Hidden Fortune Gold Mg. Co., S. D. 137, 457, 741, 941, 1,022
Hidee Gold Mg. Co., Colo. 820
Hidden Treasure Mine, Colo. 531
Higgins Mine, Minn. 821
Higgins Oil Co., Tex. 337, 782
High Island Oil-Field, Tex. 662
Highland Gold & Copper Co., Cal. 174
Highland Mary Mine. 657
Highland Mine, B. C. 657
Highland Power Co., Idaho. 900
High Peak Mine, Cal. 375, 660, 738
Hill, Alexander & Stewart. 897
Hill, Crawford. 658
Hill Iron Claims, Wash. 1,016
Hill, Leslie 1,057
Hill, Robert T. 412, 533, 577, 617, 777, 938, 1,057
Hill, Rowland F. 412
Hillside Coal & Iron Co., Pa. 537
Hillside Mg. Co., Colo. 455
Hill Top Mine, Cal. 375
Hillyer, J. M. 453
Himalaya Mg. Co., Cal. 93, 779
Hinderlider, M. C. 775
Hinds, Thomas R. 615
Hine, H. 533
Hiorns, Arthur 1,018
Hite Mine, Cal. 1,058
Hixon, H. W. 253
Hoar, Frederick W. 293, 577
Hobart, Frederick 897
Hobson, John B. 131, 173
Hock Hocking Mg. Co., Colo. 579
Hodge Iron Co., Mich. 333
Hodges, A. B. W. 936, 979
Hodgkins Mine, Cal. 535
Hoffman, George J. 818
Hoffman, Ottokar 1,018
Hoffman, Ross B. 858
Hogan Mine, Idaho. 580
Hogan Motive Power Co. 333
Hogg-Swayne Syndicate, Tex. 177
Holbert, G. S. 777
Hollow, J. T. 577
Holman Bros., Eng. 132
Holmes, J. A. 213, 658
Holmes Lime Co., Cal. 135, 980
Home Copper Co., Ariz. 1,019
Home Land & Mining Co., Colombia. 607
Home Leasing Co., Colo. 619
Homersham, Edwin C. 658
Homestake Extension Mg. Co., S. D. 1,061
Homestake Gold Mg. Co., Mont. 177, 1,021
Homestake Gold Mg. Co., S. D. 33, 45, 137, 177, 297, 337, 457, 538, 621, 941
Homestake Mine, Ariz. 578
Homestake Mg. Co., Colo. 620, 739
Homeward Bound Mine, N. S. W. 31
Honerine Mg. Co., Utah. 97, 178, 338, 377, 662, 741, 782, 942
Honerine West Mg. Co., Utah. 418
Honest John Mine, Colo. 415
Honey Bros. Smelter, Mex. 411
Honeycomb Mine, Cal. 295
Hooper, Edward. 172
Hoover, H. C. 131, 133, 172
Hoover, Theodore J. 617
Hope Mine, Cal. 335
Hope Valley Syndicate, Transvaal. 857
Hopkins, T. C. 938
Hornest Mine, Cal. 739
Hornites Gold Mg. Co., Cal. 579
Horn Silver Mg. Co., Utah. 539, 1,023, 1,061
Horseshoe Bend Mine, Cal. 175, 295, 660, 899
Horseshoe Mine, Cal. 135
Horseshoe Mg. Co., Colo. 215
Horseshoe Mg. Co., S. D. 45, 137, 258, 457, 497, 538, 741, 1,022
Houghton Development Co., Ariz. 975
Houle, A. J. 1,057
Houston Oil Co., Tex. 782
Howard, Fred., Mine Purchase in Mexico 452
Howard, Karl 658
Howard Mine, Minn. 815
Howe Sound Mg. Co., B. C. 656, 816
Howell, J. 373
Hoyt, C. A. 858
Hoyt, Henry W. 493
Huberty Estate, Cal. 1,020
Huckleberry Mine, Colo. 175, 295, 335, 375, 739, 820
Huddard, L. H. L. 67, 332, 978
Hudson Mine, Colo. 455

Huffner, M. M. ... 858
Hull City Placer, Colo. ... 92, 211
Humber Con. Mg. Co., Newfoundland. . 969
Hum, E. K. ... 131
Hungerford, William Sumner ... 1,018
Hunt, Bertram ... 978, 1,057
Hunt, G. W., Co., N. Y. ... 254, 1,058
Hunt, Leigh ... 818
Hunter Mine, B. C. ... 291
Hunter's Island Iron Ore Deposits, Ont. 297, 736
Hunter V Mine, B. C. ... 411
Huntley, Dwight ... 131
Hupp, V. W., vs. Golden Gate Mg. Co. 775
Hustead-Seamans Coal & Coke Co., Pa. . 901
Hutchinson, W. Spencer ... 495
H. Y. Climax Mine, Idaho ... 215
Hyde Iron Ore Land, Minn ... 296
H. Y. Mine, Idaho ... 1,016

I

Ibex Mg. Co., Colo. . 455, 535, 619, 739, 780, 820, 860
Iconoclast Mine, Wash. ... 258
Ida George Mine, Wash. ... 338
Idaho Continental Mg. Co., Idaho ... 176
Idaho Copper Mg. & Sm. Co., Idaho ... 215
Idaho Development Co., Cal. ... 295
Idaho Mine, N. M. ... 662
Idaho Springs Miners' Union ... 171
Idaho Springs Mg. & Reduction Co., Colo. ... 455
Idaho State Mining Association ... 697
Ida Mitchell Mine, Cal. ... 95
Iduna Mine, Mont. ... 417
Ignacio Rodriguez Mg. Co., Mex. ... 218
I. H. Morrison Mine, Mont. ... 982
Illinois Coal Miners' Convention ... 536, 661
Illinois Coal Operators' Association ... 699
Illinois Mg. Co., Utah ... 337
Illinois Steel Co. ... 959
Ima Mg. & Milling Co., Idaho ... 136
Imogene Basin Gold Mine Co., Colo. ... 780
Imperial Coal & Coke Co., B. C. ... 582, 896
Imperial Copper Co., Ariz. ... 618
Imperial Cyanide Mill, S. D. ... 45
Imperial Development Syndicate, B. C. 856
Imperial Gold Mg. & Milling Co., Colo. 660, 940
Imperial Gold Mg. & Milling Co., S. D. 137, 337, 417, 621, 862
Imperial Mine, Cal. ... 454, 495
Imperial Mines, B. C. ... 212
Imperial Salt Co., Cal. ... 301
Imperial Steel & Wire Co., Ont. ... 977
Improved Mineral Smelter Co., Idaho ... 416
Independence Con. Mg. Co., Idaho . . 456, 1,060
Independence Mine, Cal. ... 214
Independent Gold Mg. Co., Colo. ... 175, 1,059
Indian Queen Mine, Mont. ... 257, 1,060
Indiana Bituminous Coal Operators' Association ... 740
Indiana Brotherhood of Hoisting Engineers ... 536
Indiana Coal Co., Pa. ... 137
Indiana, Coal Miners' Convention . . 456, 580, 661
Indiana County Coal Land Sales, Pa. ... 137
Indiana Gold & Silver Mg. Co., Colo. ... 96
Indianapolis Switch & Frog Co., O. ... 979
Infallible Mine, Ariz. ... 779
Ingalls Gold Mg. & Leasing Co., Colo. . 175, 215
Ingalls, W. R. ... 979
Ingersoll-Sergeant Drill Co. ... 1,058
Inkerman Mine, Cal. ... 174
Insurgent vs. Lone Pine Con. Mg. Co., Wash. ... 491
International Coal & Coke Co., Can. 171, 735
International Gold Mg. Co., B. C. ... 297
International Harvester Co. ... 257, 416, 821
International Iron Co., Ont. . 297, 775, 776, 942, 983
International Nickel Co. ... 14, 211
International Railroad, Mex. ... 212
International Salt Co. ... 413, 461
International Smokeless Powder & Chemical Co. ... 422
International Steam Pump Co., N. Y. . 213, 659, 898
Inter-Ocean Mine, Mont. ... 982
Interstate Iron Co., Minn. ... 416, 1,021
Interstate Mg. & Milling Co., Utah ... 662
Intram, Robert, Mine, Cal. ... 375
Inyo County, Cal., New Gold Discovery. 859
Inyo Development Co., Cal. ... 495
Inyo Marble Quarry, Cal. ... 579
Iona Mine, Utah ... 862
Iowa Gold Dredging Co., B. C. ... 411
Iowa Lillooet Dredging Co., B. C. ... 696
Iowa Mine, Idaho ... 456
Iowa State University ... 1,018
Irish Mines Co., Ariz. ... 95
Ironclad Hill Gold Strike, Colo. ... 136
Ironclad Mine, Cal. ... 95, 1,059
Iron Creek Mg. & Development Co., S. D. ... 941
Iron Mask Mine, B. C. ... 1,016
Iron Silver Mg. Co., Colo. ... 38, 1,535
Iron Springs Mg. & Milling Co., Idaho. . 216, 580, 620, 661, 699, 821
Iroquois Mg. Co., Minn. ... 177
Isabella Gold Mg. Co., Colo. ... 256, 296, 416
Isle Royale Con. Mg. Co., Mich. . . 456, 580, 620, 821, 940, 981
Ivanhoe Gold Mg. Co., S. D. . 137, 258, 337, 538
Ivanhoe Junction Mine, W. A. ... 212, 492
Ivanhoe Mine, B. C. ... 331, 817
Ivanhoe Mine, Cal. ... 295, 1,020
Ivanhoe Mg. Co., W. A. . 134, 292, 332, 616, 657
Ivanhoe South Extended Mine, W. A. . 777
Ivy Coal & Coke Co., Ala. ... 379
I. X. L. Mine, B. C. ... 491
I. X. L. Mine, Idaho ... 1,042
I. X. L. Mine, Oregon ... 861

J

Jack Pot Mine, Colo. ... 336
Jackling, D. C. ... 332
Jackson, Frank H. ... 1,018
Jackson Revell Mine, Mo. ... 216
Jacobs, A. L. ... 858
Jacobs, E. ... 412
Jacobson Mine, Ariz. ... 980
Jacobson, Tony ... 333
James, George D. ... 1,018
James Henry Mine, Colo. ... 96
Jameson, C. D. ... 332
James, T. ... 617
Janin, Charles ... 91
Jansen, J. H. ... 91
January Mine, Nev. ... 537, 661
Japan Mines Co., Colo. ... 176, 215, 860
Jarecki Chemical Co. ... 123
Jarilla Mg. & Sm. Co., N. M. ... 661
Jasper Con. Mine, Cal. ... 95, 980
Jay Gould Mine, Mont. ... 297
Jeanesville Iron Works, Pa. ... 254
Jeans, Harold ... 858
Jefferson Copper Mg. Co., Mont. ... 257
Jeffrey Mfg. Co. ... 213, 294, 659, 898, 1,058
Jenifer Furnace Co., Ala. ... 300
Jennings Oil Field, La. . 496, 537, 661, 860
Jennings, Sidney ... 253
Jenny Creek Mg. & Milling Co., Colo. . 96
Jenny Lind Dredge, Cal. ... 134, 980
Jenny's Gulch Mg. & Milling Co., S. D. 862
Jermyn No. 2 Mine, Pa. ... 258
Jersey Lily Mine, Ariz. ... 1,019
Jessie Bell Mine, Cal. ... 134
Jessie Mine, Mont. ... 982
Jessie Mg. Co., Colo. ... 416, 580, 620
Jessop, Herbert J. ... 533
Jessop, William & Sons, Ltd., England. 453
Jesus Maria de Baquerachic Mine, Mex. 22
Jewell, Henry ... 218
J. F. T. Mine, Ariz. ... 414, 534
J. I. C. Mine, Colo. ... 256
J. I. C. Mine, Utah ... 418
Jimulco Mg. Co., Mex. ... 372, 494
John Bennet Quartz Mine, Cal. ... 455
John J. Mine, Colo. ... 739
John Royal Mine, Cal. ... 335
Johnny Bull Mine, Cal. ... 375
Johnny Mine, Utah ... 621, 662
Johns, S. ... 778
Johns-Manville, H. W. Co., N. Y. ... 213
Johnson, Fred W. R. ... 131
Johnson, E. M. ... 1,057
Johnson Mine, Cal. ... 619
Johnson, Paul ... 91
Johnson, Woolsey McA. ... 858
Johnston, Arthur W. ... 777
Johnston, J. S. ... 131
Jolly Jane Mine, Colo. ... 136
Jones, C. H. ... 1,057
Jones, Daniel A. ... 1,018
Jones, Henry ... 979
Jones & Adams Co., Ill. ... 981
Jones & Laughlin Steel Co., Pa. ... 91, 941
Jones Mine, Cal. ... 295, 619
Jones, "Mother" ... 531
Jones, Thomas G. ... 658
Jones, T. R. ... 132
Joplin Separating Co. ... 781
Jordan Mg. Co., Minn. ... 257, 1,021
Jose Gulch Mine, Cal. ... 255, 859
Josephine Mine, Cal. ... 699
Juarez Mg. Co., Mex. ... 621
Judd, H. A. ... 213
Judith Mg. Co., Mont. ... 177
Judson, John N. ... 1,057
Juessen, Edmund ... 818
Julian Con. Mg. Co., Cal. ... 95, 738
Julian Con. Mg. Co. vs. A. W. Davis. . 211
Jumbo Mine, B. C. ... 218, 1,022
Jumbo Mine, Ga. ... 215
Jumbo Mine, Idaho . . 136, 256, 336, 661, 740, 816
Jumbo Mountain Mg. Co., Colo. ... 940
Jumper Gold Syndicate, Cal. ... 95, 255
Juncton Development Co., Ariz. ... 347, 1,056
Juno Mines, Ltd., B. C. ... 532, 1,017
Jupiter Mine, Cal. ... 95
Jupiter Mine, Mex. ... 252

K

Kalbfleisch Chemical Co. ... 262
Kalbfleisch, Franklin H. ... 221
Kalgoorlie Gold-Field, W. A. ... 29
Kalgoorlie Railway, W. A. ... 212
Kalgurli Mg. Co., W. A. . 134, 212, 411, 857
Kamloops Mines, B. C. ... 418
Kamloops-Sailor-Minnehaha Consolidation, B. C. ... 776
Kane Mine, Colo. ... 215
Kanig Mine, Cal. ... 619
Kansas-Burroughs Con. Mg. Co., Colo. 325, 496, 820
Karma Gold Mg. Co., Cal. ... 211
Karma Mg. Co. vs. T. J. Durand. ... 171
Karolyi Mine, Cal. ... 495
Kasaan Bay Mg. Co., Alaska ... 779, 980
Katona, Louis ... 1,018
Kedzie, George E. ... 938
Keith, Frank ... 293, 858
Keith-Kearns Mill, Utah ... 457, 604
Keller, H. A. ... 658, 777, 1,057
Keller & Indiana Sm. Co., Wash. ... 983
Kellogg Mine, Ga. ... 496
Kelly Coal Co., Ill. ... 536
Kelly, John F., Engineering Co., N. Y. 374
Kelly, W. A. ... 131
Kelly, Walter S. ... 858
Kemp, J. H. ... 697
Kemp Oil Smelter ... 615
Kendall Gold Mg. Co., Mont. . 216, 576, 861
Kendall, J. D. ... 737
Kennan Mill, Ariz. ... 95
Kennebec Mine, Utah ... 983
Kennedy, Julian, Sahlin & Co. ... 374
Kennedy & Miller Mine, Cal. ... 454
Kennedy Mg. Co., Cal. . 95, 134, 214, 698, 816, 819, 1,019
Kenosha Mine, Cal. ... 889, 940
Kent Coal Concession, Ltd., England. . 736
Kenton Machine Works, O. ... 618
Kentuck Mine, Idaho ... 900, 1,042
Kentucky-Vermillion Mg. Co., Mont. ... 491
Kern River Co. . Cal. ... 134, 255
Kerr, R. J., Land Purchase, Mex. ... 491
Keswick, J. J. ... 898
Keys Mine, Cal. ... 1,020
Keyser, William ... 1,018
Keystone-Bromide Mg. Co., N. M. ... 662
Keystone Con. Mg. Co., Cal. . 171, 174, 334, 415, 739, 779
Keystone Copper Sm. Co., Mex. ... 372
Keystone Driller Co., Pa. ... 494, 859
Keystone Mine, Ariz. ... 534, 898, 980
Keystone Mine, B. C. ... 212, 498
Keystone Mg. Co., Colo ... 96, 256, 660
Kidder, Peabody & Co. ... 783
Kilbourne & Jacobs Mfg. Co., O. ... 132
Killarney Mine, Colo. ... 820
Kilo Mine, B. C. ... 615
Kimball Mines, Cal. ... 1,019
Kimberly-Montana Gold Mg. Co., Mont. 376, 861
Kimler Run Coal & Coke Co., Pa. ... 258
King Gold & Capper Mg. Co., Wash. ... 701
King Mine, Mont. ... 257
King Mine, Wash. ... 581
King Solomon Mine, Cal. ... 414, 619
Kingsford Foundry & Machine Works, N. Y. ... 778
Kingston Coal Co., Pa. ... 700, 982
Kingston & McMinnville Mines, B. C. . 977
Kingston School of Mining, Ont. ... 896
Kinney Mine, Minn. ... 1,021
Kinnon, W. H. ... 1,057
Kintla Lake Oil Co., Mont. ... 257, 378
Kintla Lake Oil Field, Mont. ... 257
Kinyon Mill, Cal. ... 134, 174
Kirk Mine, Colo. ... 255, 535
Kirkland Placer Mines, Oregon. ... 982
Kirtley Mine, Colo. ... 335
Kiser & Maguire Mine, Cal. ... 375
Kittie Burton Gold Mines Co., Idaho. 256, 900
Klamath River Gold Mg. Co., Cal. ... 940
Klau Mine, Cal. ... 698
Kleeman, C. J., Land Purchase, Mex. . 491
Klepetko, Frank ... 293, 577, 778
Klerksdorp Mine, S. A. ... 252
Klingermann, H. ... 253
Klipriversberg Mynpacht Syndicate. ... 532
Klondike Mg. Co., Cal. ... 135, 495
Kloz, Ludwig ... 778
Kluff Mine, Mont. ... 740
Kneebone vs. Elmore ... 896
Knight, E. C. ... 938
Knob Hill Mine, Wash. . 97, 259, 338, 418, 662, 741, 983, 1,061
Knox, Chester W. ... 658
Knox Coal Mine, Ind. ... 661, 740
Knox, H. H. ... 533
Knox, Newton B. ... 91
Knutsen, Hans ... 293, 373, 493
Kohn Mine, Cal. ... 819
Kolar Gold-Field, India ... 138, 338, 701
Komata Reefs Mg. Co., N. Z. ... 493
Kootenay Lead Mines, B. C. ... 776
Kootenay Mine, B. C. ... 291
Koppel, Arthur, N. Y. ... 174
K. R. S. Mg. & Milling Co., Colo. . 335, 455, 579
Kunz Mine, Nev. ... 1,056
Kuranui-Caledonia Mine, N. Z. ... 576
Kwang, Kwong Yung ... 737

L

Labadie, E. L. ... 737
La Clara Placer & Mines Co., Colombia 616
Laclede Fire Brick Mfg. Co., Mo. ... 578
Ladd Metals Co., Idaho ... 1,016
La Dicha Copper Co., Mex. ... 1,056
Lady Shenton Mine, W. A. ... 332
La Fama Mine, Mex. ... 776
Lafayette College ... 173
La Fieste Mine, Cal. ... 1,059
La Grange Ditch Sale, Cal. ... 135
La Grange Hydraulic Mg. Co., Cal. 619, 1,055
Lagunas Nitrate Co., Chile ... 221, 954
Laharpe Smelting Co., Kan. ... 15
Laidlaw-Dunn-Gordon Co., N. Y. ... 174, 738
Laird, George A. ... 412
Lake Angeline Mines, Mich. ... 257
Lake George Mines vs. Gibbs, Bright & Co. ... 777, 817
Lake Mine, Cal. ... 534
Lake Navigation, Opening ... 935
Lake Superior & Arizona Mg. Co., Ariz. ... 495, 1,019
Lake Superior Copper Mines Consolidation, Proposed ... 582
Lake Superior Corporation ... 939, 1,019
Lake Superior Iron Co., Minn. ... 216
Lake Superior & Pittsburg Development Co., Ariz. ... 10, 174, 374, 975
Lake Superior Power Co. ... 14
Lake View Consols Mine, W. A. ... 212, 897
Lakota Mg. Co., S. D. ... 258
Lamarque Mine, Cal. ... 174, 214, 698, 940
Lamb, R. B. ... 858
Lamington Oil Co., Ont. ... 656
Lamphear Mine, Cal. ... 95
Lampker & Hunstock, Ariz. ... 454
Lancefield Mine, W. A. ... 212, 292, 616
Landa, Reiji ... 1,057
Landis, Edward K. ... 131
Lane, C. D., Mines, Goldfield, Nev. ... 901
Lane, L. L. ... 858
Lane Mine, Cal. ... 819
Langeloth, J. ... 412, 978
Lanyon, J. ... 978
Lanyon Zinc Co. ... 907
La Noria Mine, Mex. ... 532
Lansell, Geo., Mines, Victoria. ... 372
La Paz Mg. & Sm. Co., Mex. ... 332, 373
La Plata Mine, Colo. . 415, 455, 496, 660, 739
Lappin Mine, Cal. ... 135, 495
Large Hill Mine, Salvador ... 1,048
Larose Mineral Land, Ont. ... 1,016
La Salle Mg. Co., Colo. ... 38
Las Animas County, Colo., Martial Law in ... 531
Las Chiapas Mines, Mex. ... 532
Last Chance Mine, Colo. ... 175, 579, 820
Last Chance Mine, Idaho ... 781
Last Chance Mine, N. M. ... 662
Last Chance Mg. Co., Wash. . 371, 817, 942
Last Dollar Mg. Co., Colo. ... 96
Latchaw Mine, Colo. ... 175
Lathbury, B. B. ... 1,018
Lathrop, Frank H. ... 453
Laurentide Mica Co., Ont. ... 976
Lawrence, Ben B. ... 978
Lawrence County, S. D., Floods. ... 982
Lawrence, David H. ... 131, 373
Lawrence, H. C. ... 737
Lawrence Mine, Colo. ... 136
Lawrence, T. J. ... 938
Lawson, H. E. ... 332
Lawson, Mordaunt ... 292
Layland Sand & Stone Co., O. ... 422
Lavman Mine, Cal. ... 295
Lead Carbonate Discovery at Sawpit, Colo ... 416
Leadville-Denver Tunnel & Tramway Co., Colo. ... 135
Leadville Mine, Ariz. ... 975
Leadville Ore Production, Colo. . 38, 86, 96, 175, 196, 256, 496, 535, 579, 780
Leahy Bros., Cal. ... 294
Leamington Oil Co., Ont. ... 976
Lebanon Mine, Colo. ... 175
Le Clair Mg. Co., Colo. ... 96
Lederle, Ernest J. ... 617
Ledge Mg. & Milling Co., Colo. ... 415
Lee, E. A. ... 858, 938
Lefevre, Henry F. ... 373, 453
Leffel, James & Co., O. ... 778
Leffingwell, W. H. ... 533
Leggett, Thomas H. ... 172, 212, 577, 617
Lehigh Coal & Navigation Co., Pa., 984, 1,061
Lehigh University ... 534, 737
Lehigh Valley Coal Co., Pa. ... 337, 782
Lehigh & Wilkes-Barre Coal Co., Pa. 782 862, 982
Leland Mine, Ariz. ... 174, 374
Lengle, E. Fleming ... 172, 777
Lenora Mg. Co., B. C. ... 133, 211, 776, 816
Lenzarder, Benj. T. ... 131
Leo Mg. Co., S. D. ... 137
Leonard Mg. Co., Minn. ... 416
Le Roi Mg. Co., B. C. . 212, 251, 291, 331, 332, 538, 621, 1,017
Le Roi No. 2 Mine, B. C. . 211, 372, 532, 621, 657
Le Royer, Georges ... 818
Leroy Mg. Co., Idaho ... 296, 336, 580
Leschen, A., & Sons' Rope Co., Mo. . 173 373, 618, 698, 778, 939
Leslie, Roscoe R. ... 412
Levy, Ernest ... 293
Lewis, George ... 412
Lewisohn, Jesse ... 746
Lexington Gold Mg. Co., Idaho ... 296
Lexington Hill Gold Mg. Co., S. D. . 258, 497, 898, 1,061
Lexow, Theodore J. F. ... 373
Leyner, J. George, Engineering Works Co., Colo. ... 578, 698
Libby Mine, Oregon ... 728
Libertad Mine, Cal. ... 535
Libertad Mine, Mex. ... 252
Liberty Bell Gold Mg. Co., Colo. . 176, 215, 256, 536, 860
Liberty Clark Mine, Ariz. ... 36
Liberty Hill Mine, Cal. ... 174
Lida Mine, Cal. ... 134
Lidgerwood Mfg. Co. ... 294
Lidner, P. G. ... 737
Lightning Creek Gold Gravels & Drainage Co., B. C. ... 1,056
Lights of London Mine, W. A. ... 617, 897
Lillian Mine, Colo. ... 415, 496
Lill Mine, Mex. ... 252
Lillooet, Fraser River & Cariboo Gold-Fields, B. C. ... 251
Lily Mine, Colo. ... 255, 536
Lime Quarries, California ... 615
Lincoln Mine, Idaho ... 336, 1,042, 1,059
Lincoln Mine, Minn. ... 216
Lindgren, Waldemar ... 213, 697
Lindsay, Lionel ... 1,018
Lindsey, G. G. S. ... 373
Link-Belt Engineering Co., Pa. ... 373, 453
Link-Belt Machinery Co., Ill. ... 131, 778
Lipman Tunnel, Idaho ... 1,007
Little Bessie Mine, Colo. ... 336
Little Bonanza Mine, Cal. ... 214
Little Giant Mine, Cal. ... 95
Little Jim Mg. & Leasing Co., Colo. . 619, 699, 1,059
Little Lallie Mines Co., Colo. ... 820
Little Louise Mine, Colo. ... 175, 256
Little Maud Mine, Colo. ... 296
Little Mine, Mich. ... 257
Little Nell Mine, Cal. ... 135
Little North Fork Mg. Co., Idaho. ... 940
Little Pittsburg Mine, Colo. ... 415, 455
Little Wonder Air Drill ... 1,019
Little Wonder Lease, W. A. ... 978
Liverpool Mg. Co., Mont. ... 815, 1,060
Livingston, H. C. ... 253
Lloyd Gravel Mine, Cal. ... 495, 578
Lluvia de Oro Mine, Mex. ... 22, 133
Loaf Gold Mg. & Milling Co., Colo. ... 215
Lock, C. G. Warnford ... 373
Locomotive & Machine Works, Can. ... 413
Loddon Gold-Fields, W. A. ... 133
Logue, C. D. ... 253
Lonaconing Mine, Colo. ... 1,059
London & Dakota Mine, S. D. ... 417
Londonderry Mine, W. A. ... 616
Londonderry vs. United Gold Mines Co., Colo. ... 895

Londonderry vs. Wild Horse Mine, Colo. 660, 699, 739, 780, 900
London Mine, Colo. 780
London Mine, Mont. 376
Lone Jack Mine, Cal. 579
Lone Pine Con. vs. Insurgent Mg. Co., Wash. 491
Lone Pine-Surprise Con. Gold Mg. Co., Wash. 328
Lone Star Mg. Co., Oregon. 497
Lone Tree Mine, Cal. 275
Long Mineral Extracting Co., Cal. 374, 495
Longfellow Mine, Cal. 455, 940, 1,020
Longyear Mesabi Land & Improvement Co. 216, 916
Lookout Extension Mine, Ariz. 980
Lookout Mountain Coal & Iron Co., Ala. 744
Lorberry Mine, Pa. 782
Loretto Mine, Mich. 900
Los Gallos Mine, Mex. 817
Lost Horse Mine, Cal. 980
Lottie Mine, Colo. 135
Louisville & Nashville Railroad. 1,061
Lowden Ranch, Cal. 335
Lower Mammoth Mg. Co., Utah. 137
Lubeck, A. H. 213
Lucas, A. F. 412, 978
Lucille Dreyfus Mg. Co., Wash. 576
Lucky Boy Mg. Co., B. C. 936
Lucky Boy Mg. Co., Oregon. 297
Lucky Call Mine, W. A. 411
Lucky Jack Mine, B. C. 133, 171, 331
Lucky Jack Mine vs. Tanghe, B. C. 696
Lucky Lad Mine, Idaho. 336
Lucky Queen Mine, Oregon. 258
Lucky Strike Gold Mg. Co., S. D. 741, 941, 1,061
Lucky Strike Mine, Cal. 495
Lucky Tiger Mine, Mex. 452, 856
Ludlow Belle Mg. Co., Cal. 738
Lukis, Ernest du B. 979
Lukita Mg. Co., Mex. 817
Lump Gulch District, Mont. 815
Lund, Jens. 293
Lundberg, Dorr & Wilson Cyanide Plant, S. D. 177, 417
Lustre Mg. Co., Mex. 977
Luther, R. C. 737
Lutz Mine, Colo. 981
Luz de Borda Mg. Co., Mex. 658
Lyell Blocks Mg. Co. 172
Lyons, James W. 858

M

Maas Mine, Mich. 257
Mabel Mertz Mine, Cal. 619
Maben, J. C. 493
McAfee-Lind Mg. Co., Ga. 456
McAlpine Mine, Cal. 859
Macbeth, R. 1,018
McCabe Mine, Mont. 257
McCaffery, R. S. 293
McCarn, H. L. 373
McCartney, R. J. 333
McCaskell, J. A. 493
McClaffin, Sam. 212
McClave, J. M. 131, 333
McCloud River Electric Powder Co., Cal. 816
McConnel, F. W. 897
McConnell Wheel & Mine Supply Co., Pa. 1,058
McCormack & Ramsay Mines, Ala. 379
McCormick, E. 253
McCornick, Clarence 697
McCreath, Andrew S. 373
MacDonald, Bernard. 412
McDougal Combination, Colo. 256
Macfarlane, James. 412
McGarry, H. 533
McGee Mine, Cal. 659
McGeorge, John. 293
McGill & Standart. 491
McGill University. 251, 697
MacGinnis, John, vs. Amalgamated Copper Co. 217
McKee Mine, Cal. 294
McKenna Mine, Mich. 900
MacKenzie, A. V. 91
Mackenzie, Geo. L. 253
Mackenzie, John H. 617, 1,057
Mackenzie, Quarrier & Ferguson. 534
McKinley Mine, Cal. 135, 619, 816
McKinlay, William B. 91
McKinley Mine, Idaho. 416
McLean, James 737
McLellan Mine, Mont. 1,060
McMillan, Anthony J. 697
Macmillan, J. A. 896
McMillan Mine, Nev. 740
Mack Mine, Cal. 95, 135, 619
McNally, D. J. 658
McNamara Mg. Co., Nev. 497
McNight, William N. 1,057
McPherson, D. E. 173
McVichie, Duncan 173
Madrone Mine, Cal. 859, 899, 1,058
Magenau, Wm. 818
Magna Vista Mine, Colo. 1,059
Magnet Mine, Colo. 415
Magnolia Mg. & Reduction Co., Colo. 295
Magpie Mine, Cal. 619
Maguire, Frank Z. 577
Maguire Mine, Ariz. 414
Mahala Mine, Cal. 214, 495
Mahoning Ore & Steel Co., Minn. 781, 821, 860, 1,021
Mainstay Gold Mg. Co., S. D. 258
Majestic Copper Mg. & Sm. Co., Utah. 258, 457, 581, 700, 935, 1,016, 1,056, 1,061
Majestic Mine, Colo. 136
Malcolmson, S. A. 533
Mallory, Hulanisk & Burt, N. Y. 173
Malone Mine, Cal. 174, 334
Maltman Mine, Cal. 819
Mamie Mine, Alaska. 76
Mammoth-Collins Mine, Ariz. 174
Mammoth Gold Mg. Co., Wash. 983
Mammoth Mine, Cal. 135, 415, 980
Mammoth Mg. Co., Utah. 137, 258, 1,063
Mandell, F. C. 617
Manila Gold Mg. Co., S. D. 862
Manila Quartz Mines Con., Cal. 936
Mann Mine, Cal. 95
Manning Bros. Mine, Cal. 375
Manning, Maxwell & Moore. 989
Mansfield Mine, Mich. 376, 900
Mapimi District, Mexico. 776
Marble Bay Mine, B. C. 251
Marengo Portland Cement Co., Ind. 91
Maria Teresa Mine, Mex. 252
Marion Coal Co., Pa. 417
Mariposa Land & Commercial Co., Cal. 1,015
Markle Mine, Cal. 495
Marks, Louis J. 253
Maroma Lixiviation Works, Mex. 332
Marquette & Arizona Mg. Co., Ariz. 975
Marriner, J. T. 412
Marriott, T. Bruce 897
Marston, A. 397
Martel Mg. Co., Cal. 619
Marvin Electric Drill Co., N. Y. 698
Mary D. Coal Co., Pa. 377
Mary Mine, Nev. 759
Mary Murphy Mine, Colo. 175
Marysville-Downieville Electric Ry., Cal. 1,015
Mascot Mg. Co., Colo. 579
Mason & Barry, Portugal. 817
Masonic Bar Mine, Cal. 899, 940
Masontown Mg. & Milling Co., Colo. 660, 981
Mass Con. Mg. Co., Mich. 257, 456, 458, 537, 620, 781, 982, 1,060
Massachusetts Institute of Technology. 1,015
Massico Mg. Co., Mex. 452
Matagorda Oil Field, Texas. 782
Mather, Henry A. 737, 858
Mathews, E. P. 1,055
Mathez, Auguste. 131, 533, 658, 938
Matoa Mg. Co., Colo. 176
Maud, Harry G. 737, 778
Maury, George P. 979
Maxwell Mine, Oregon. 861
May, J. J. 493
Maybert District, Cal. 214
Mayday Mine, Cal. 698
Mayer, Charles F. 333
Mayflower Mine, Cal. 939, 1,058
May & Jennie Mine, B. C. 532
May Mine, S. D. 982
Maynard, George W. 737, 897
Mazapil Copper Co., Mex. 663
Mazeppa Mg. & Milling Co., Colo. 1,020
Mead, John A., Mfg. Co., Ill. 898
Means-Fulton Iron Works, Ala. 955
Means, J. H. 412
Mecklenburg Potash Co., Germany. 625
Medicine Chief Mine, Ariz. 578
Medina Mg. Co., Cal. 940
Meguntcook Mine, Colo. 531
Meighan, James M. 493, 617
Mein, W. W. 818
Meissner, C. A. 658
Melbourne Coal Miners' Association. 452
Melkior Gold Mg. Concession, French Guiana 458
Mendota Mine, Colo. 96, 780
Menlo Mg. Co., Cal. 495
Menzies Con. Mine, W. A. 332
Menzies, William John. 577
Mercantile Trust Co. 815
Mercer, J. W. 412, 737, 818, 1,018
Meritoria Gold Mg. Co., Colo. 175
Merlett, A. A. 172
Mermenta Development Co., La. 496
Merrill, F. J. H. 897
Merrimac Chemical Co., Mass. 221
Mertons Reward Mine, W. A. 292
Mesabi Range Explorations, Minn. 176, 336
Meserve, H. S. 533
Metallic Mine, Colo. 175
Metallurgical Co. of America. 867
Metropolitan Gold Mg. Co., Cal. 738
Metz, George E. 617
Mexican Coal & Coke Co., Mex. 1,056
Mexican Gold-Fields Co., Mex. 133
Mexican Light & Power Co., N. Y. 618
Mexican Metallurgical Co., Mex. 332
Mexican Mine & Smelter Supply Co. 659
Mexican National Dynamite & Explosives Co., Mex. 696
Mexican National Railroad. 777
Mexican Petroleum Co., Mex. 251, 736, 737
Mexico-Joplin Land Co., Mo. 1,060
Mexico Mine & Smelter Supply Co. 91, 494
Mexico Mining & Exploration Co., Mex. 856
Meyer, Cord 493
Miami Mg. Co., N. C. 177
Michael Davitt Mine Suit, Mont. 575
Michigan Mg. Co., Mich. 257, 456, 537, 581, 620, 781, 982, 1,060
Michigan Sm. Co., Mich. 376, 537, 821, 900, 981
Michipicoten Iron Range, Examination of 896
Midas Gold Dredging Co., Mont. 1,055
Midas Gold Mg. Co., Cal. 411, 415, 451, 695, 739, 779, 1,020
Midas Mg. Co., Colo. 96, 175, 215, 236, 295, 536, 579, 660, 739
Midas Mine, Utah. 700
Middletown Car Works, Pa. 173
Midnight Mine, Ariz. 698
Midnight Mine, Mont. 257
Midnight Mg. Co., Wash. 662
Midnight No. 3 Mine, Colo. 1,059
Midvale Steel Co., Pa. 618
Mile High Gold Mg. Co., S. D. 417
Millen, J. D. 858
Miller, Guy E. 176
Miller, Harry Huntington. 577
Miller, M. M. 493
Miller, W. G. 896
Miller, Wm. P., Jr. 213
Milliken Bros., N. Y. 491
Milliken, W. B. 777
Millionaire Mine, Oregon. 782
Mills, C. E. 453
Millspaugh Mg. & Milling Co., Cal. 619
Milwaukee Coke & Gas Co., Wis. 617
Milwaukee Extraction Co., Mont. 97
Milwaukee Gold Mg. Co., Colo. 456
Milwaukee Mg. Co., Cal. 619, 779
Minah Mine, Mont. 700
Minard, S. F. H. 897
Mine & Smelter Supply Co. 213, 413, 1,019
Mineatta B. Mine, Cal. 214, 495
Mine La Motte, Mo. 14
Mineral Creek Mg. Co., Wash. 74
Mineral Smelter, Idaho. 416
Miners' Foundry & Machine Products Mfg. Co., Texas. 737
Mingo Mg. Co., Colo. 415
Minnehaha Mine, Wash. 1,022
Minnehaha - Sailor - Kamloops Consolidation, B. C. 776
Minnesota & Arizona Gold Mg. Co., Ariz. 618
Minnesota Iron Co. 177, 257
Minnesota Mine, Ariz. 414, 534, 698, 898
Minnesota Mines Co., S. D. 862
Minnesota Mg. & Mfg. Co., Minn. 861
Minnesota Silver Co., B. C. 616
Minnie Healy Mine, Mont. 417
Minnie May Mg. Co., S. D. 258
Minnie Moore Mine, Idaho. 580, 1,006
Minorca Mine, Minn. 176
Miskwabik Development Association, Mich. 256, 497, 620, 821
Missouri & Colorado Milling & Mg. Co., Colo. 579, 702, 940
Missouri-Mexican Mg. Co., Mex. 332
Mitchell & Co., Cal. 779
Mitchell, Fred. 737
Mitchell, L. H. 737
Mixer, C. T. 293, 373, 778
M. & M. Mine, Colo. 579
Moctezuma Copper Co., Mex. 10
Model Gold Mg. Co., Ariz. 738
Moffat Mine, Colo. 860
Mogollon Gold & Copper Co., N. M. 417, 861, 982
Mohave Copper Co., Cal. 1,020
Mohave District, Cal. 535
Mohave Gold Mg. Co., Ariz. 414, 578, 1,019
Mohawk Mg. Co., Mich. 216, 257, 456, 620, 781
Molalla Central Mg. Co., Oregon. 1,061
Mollie Mine, Idaho. 1,021
Molson, C. A. 658
Monarch Coal Co., Wyo. 782
Monarch Gold & Copper Mines, B. C. 251
Monarch Mg. Co., Idaho. 1,060
Monarch Mines & Smelters' Corporation, Utah 258
Monica Mine, Ariz. 659
Monitor Mine, Mont. 257, 457
Monitor Mg. Co., B. C. 332
Monmouth Mine, Ariz. 698
Mono Mine, Cal. 820
Monongahela Engineering Co. 333
Monongahela River Con. Coal & Coke Co. 54, 703
Monroe Mine, Minn. 257, 815
Montreal & Boston Con. Mg. & Sm. Co., B. C. 1,056
Montana Gold Dredge Co., Mont. 97
Montana-Idaho Mg. Co., Idaho. 215
Montana Mg. Co., Mont. 937
Montana Ore Purchasing Co. 575
Montana Ore Purchasing Co. vs. Boston & Montana Mg. Co. 575
Montana-Revenue Mg. Co., Mont. 822
Montana vs. St. Louis Mg. & Milling Co., Mont. 781
Montana School of Mines. 1,018
Montana Society of Engineers. 293, 453, 617
Montana Tonopah Mg. Co., Nev. 44, 177
Monte Mine, Cal. 535
Monte Queen Mine, Colo. 535
Monterey Coal Co., Mex. 858
Monterey Iron & Steel Co., Mex. 133, 372, 856
Monterey Light & Power Co., Mex. 578
Montezuma Gold Mg. & Milling Co., Colo. 579
Montezuma Lead Co., Mex. 21, 372
Montgomery Gold Leaf Gold Mg. Co., N. J. 417
Montgomery, Robert J. 577
Montgomery, W. S. 92
Monticello Mine, Mo. 821
Montreal & Boston Con. Mg. & Sm. Co., B. C. 371, 582, 663, 696, 701, 702, 735, 816, 902, 983, 1,022
Montreal Mine, Mich. 176
Monument Mine, Colo. 860, 900
Moolort Goldfields, W. A. 133
Moon Anchor Gold Mg. Co., Colo. 96, 620
Moonlight Mine, Mont. 1,021
Moore Cyaniding Co., Utah. 334
Moore, B. S. 896
Moore, Willis G. 172
Moose Mine, Colo. 579
Moraine Mg. Co., Oregon. 728
Morgan, A. 253
Morgan, Cecil C. 697
Morgan, Donald R. 293, 453
Morgans, A. E. 616
Morning Glory Mine, Colo. 739
Morning Glory Mine, Wash. 259, 338, 983
Morning Mine, Idaho. 216, 580, 781
Morning Mine, Oregon. 337
Morning Star Mine, Cal. 255, 334
Morning Star Mine, Colo. 536, 660, 780
Moro Mg. Co., Colo. 531
Morris, C. L. 131
Morrison & Carlock Mine, Cal. 535, 940
Morrison Combination, Colo. 579
Morrison, Edward H. 91
Morrison Mines, Ltd., B. C. 532, 696
Morrison—Montreal & Boston Consolidation, B. C. 582
Morrow, J. T. 617
Moss, Frank H. 131
Moss Fume Destroyer in W. A. 411
Mossback Mine, Ariz. 454, 698
Moulton Garnet Mines, Cal. 175
Mountain Boomer Mine, Cal. 214
Mountain City, Nev., Silver Discoveries at 941
Mountain Copper Co., Cal. 135, 295, 371, 535, 615, 659, 698, 779, 976, 1,015
Mountain King Mine, Cal. 95, 495, 1,658
Mountain Lily Mine, Cal. 535, 780
Mountain Lion Mine, Cal. 699, 1,059
Mountain Lion Mine, Colo. 820
Mountain Lion Mg. Co., Wash. 97, 137, 217, 259, 338, 538, 741, 901, 976, 983, 1,061
Mountain Monarch Mg. Co., Colo. 175
Mountain Vale Mine, Cal. 495
Mountaineer Mine, Cal. 375
Mt. Andrew Mine, Alaska. 76
Mt. Bischoff Tin Mine, Tasmania. 32, 172, 309, 533, 857
Mt. David Mine, N. S. W. 31
Mt. Garnet Freehold Mine, Queensland. 31
Mt. Hope Mine, Cal. 135
Mt. Jefferson Mines Co., Cal. 251, 581, 739, 820, 936, 940
Mt. Lyell Mg. & Railway Co. 172, 252, 292, 492, 617, 857
Mt. Lyell Sm. Co., Tasmania. 617
Mt. Morgan Mg. Co., Queensland. 31, 496, 617, 657
Mt. Rosa Mg., Milling & Land Co., Colo. 456
Mt. St. Helens Con. Mg. Co., Oregon. 982
Mt. Vernon Mine, Cal. 295, 335, 375, 495, 779
Mt. Whippel Mg. Co., Cal. 375
Mowrey, Paul M. 938, 1,057
Moyer, Charles H. 695, 735, 1,055
Moyer-Klein Co., Cal. 95
Moyer Mine, Colo. 375
Moyer, Prest. 531
Muir, Wm., vs. A. K. Robinson. 735
Mulga Queen Reward Mine, W. A. 616
Mulgabbie District, W. A. 212
Munganna Mines, Tasmania. 617
Munhall, John 979
Munroe, H. S. 658
Murchie Con. Mg. Co., Cal. 174, 255, 295, 535, 819, 936
Murchison Mine, W. A. 492
Murdoch, J. V. Burn. 373
Murphy & Ihlsing Concentrator, Mex. 977
Murphy Mg. Co., Colo. 579, 981
Murray Iron Works, Iowa. 659
Murray, W. T. 293
Murtha Mine, Colo. 820
Muskeg Mg. Co., Minn. 296
Muskingum Valley Iron & Steel Co., O. 181
Mutual Benefit Gold Mg. Co., Colo. 535, 660
Myers, G. W. 1,018
Mysore Gold Mg. Co. 532

N

Nacia Mg. Co., Mex. 697, 937
Nagel, Frank J. 412
Nahl, Arthur C. 333
Nanaimo Coal Mines, B. C. 371
Nancy Hanks vs. Tiger Mine, Mont. 297
Naomi Coal Co., Pa. 941
Nash, A. Q. 737
Nashville Mine, Colo. 335, 415
Nason, Frank L. 979
National Association of Blast Furnace Workers and Smelters. 786
National Association of Manufacturers. 898
National Copper & Gold Mg. Co., Ariz. 1,019
National Electric Co. 453, 578, 819
National Lead Co. 11, 14, 57
National Lime Manufacturers' Association 294
National Metal Co., Mex. 817
National Metallurgical Co., Mex. 452
National Mine, Mich. 581
National Mine, Pa. 982
National Mg. Co., Wash. 95
National Mg. & Milling Co., Colo. 455
National Oil Burner & Equipment Co., Mo. 334
National Oil Co., Texas. 498
National Oil & Transportation Co., Cal. 251, 451
National Portland Cement Co., Mex. 292
National Portland Cement Co., Ont. 371
National Pump Manufacturers' Association 939
National Salt Co. 413, 461
National Smelting Co., S. D. 137
National Sm. & Refg. Co., Cal. 816
National Tube Co. 262
Native Sons Gold Mg. Co., Cal. 1,058
Natividad Mine, Mex. 576
Neepawa Mine, B. C. 856
Negaunee Mine, Mich. 176
Neglected Mine, Colo. 455
Neglected Mine, Idaho. 136
Neill, Jas. W. 453
Neilson, John. 778
Nellie Bly Mill, Colo. 215
Nellie Cotton Mine, B. C. 452
Nellie Mine, Cal. 939
Nellie M. Mine, Colo. 96, 296, 416, 535, 536
Nelson District, B. C. 93
Nelson Mine, Cal. 454, 534
Ne Plus Ultra Mine, Nev. 1,060
Neptune Mine, Cal. 95
Nesbit Mine, Mex. 372
Nettie L. Mine, B. C. 133, 576
Nevada Alpine Mg. Co., Nev. 44
Nevada Keystone Mg. Co., Nev. 377
Nevada Park Mg. Co., Nev. 377
Nevadaville Con. Gold Mg. & Milling Co., Colo. 135
Neversweat Mine, Cal. 375
New Almaden Mine, Cal. 660
New Blue Point Mine, Cal. 780
New Bodie Mg. Co., Cal. 779
New Boston Mine, Colo. 580
New Chillagoe Railway & Mines Co. 31, 252, 857
New Emmet Mines Co., Colo. 175, 496
New England Con. Mg. Co., Ariz. 452
New England Gold & Copper Co., Utah. 581
New England Mg. Co., Mex. 452
New Era Mine, Nev. 661
New Era Tunnel, Colo. 253

New Eureka Mine, Cal.....295, 414, 940
New Exploration Co.....292, 372
New Gold-Fields of British Columbia.. 133
New Havillah Mine, Victoria..... 616
New Highland Gold & Copper Co., Cal. 334, 495, 578
New Imperial Mines, Ltd., B. C..... 452
Newitt, Philip 658
New Jersey Gold Mg. & Milling Co., Idaho 371, 416
New Jersey Iron Mg. Co., N. J..... 782
New Jersey Slate Co., N. J..... 661
New Jersey Zinc Co., N. J..... 16
New Leadville Home Mg. Co., Colo.... 205
New Mexico School of Mines..... 413
New Monarch Mg. Co., Colo...536, 619, 699
New National Tunnel Co., Colo..... 255
New Paccha & Jazpampa Nitrate Co., Chile 786, 954
New Pittsburg Coal & Mg. Co., Ind.... 336
New Rambler Mine, Wyo..... 41
New Ravenswood Mine, Tasmania..... 617
New Vulture Mg. Co., Ariz.....1,058
New York Academy of Sciences.....91, 453
New York Belting & Packing Co.....1,019
New York & Bermudez Asphalt Co..... 218
New York Bonanza Mg. Co., Utah..... 297
New York-Brooklyn Mine, Colo..... 455
New York Con. Mine, Oregon..... 497
New York-Grass Valley Mg. Co., Cal.. 525
New York & Honduras Rosario Mg. Co., C. A..... 458
New York Mine, Cal.....174, 255, 699
New York & Montana Copper Mg. Co., Mont. 257
New York, Ontario & Western Railroad 982
New York Stock Exchange Election.... 783
New Zealand Crown Mg. Co., N. Z.... 493
New Zealand State Coal Mine.....493, 857
Newberry Mountain Mines, Cal..... 940
Newfoundland Mine, Colo.....455, 579
Newfoundland Petroleum Co..... 969
Newhouse, Edgar L.....735, 815
Newhouse Mines & Smelters Corporation, Utah.....377, 534, 982, 1,019, 1,061
Newhouse, Samuel..... 858
Newhouse Tunnel, Colo..... 975
Newland, D. H.....293, 791
Newport-Nevada Mine, Nev..... 661
Next President Mine, Colo..... 535
Nichols Chemical Co..... 422
Nichols, Ralph.....172, 373, 737
Nicholson, Hudson H.....737, 938
Nickel Plate Mine, B. C.....24, 411
Nicolson, R. B..... 737
Night Hawk Mine, Wash.....217, 735
Nil Desperandum Mine, Colo...455, 496, 619, 820
Niles-Bement-Pond Co.333, 494, 618, 939, 980
Nimshew Mg. Co., Cal..... 495
Nine-Mile Mg. Co., Idaho..... 416
Nisi Prius Mine, Colo.....96, 295, 739, 1,059
Nissen, P. M..... 253
Niver, W. K., Coal Co., Pa..... 700
Nixon Mine, Pa..... 662
Noble Mines, Ltd., Cal.....859, 980
Nogales Copper Co., Mex.....372, 452
None Such Mine, Mont..... 337
Nooksack Mg. Co., Wash..... 701
Nooksack Mine, Idaho.....1,059
Norris, R. Van A.....711, 737
North Alabama Railroad..... 703
North America Graphite Co., Ont..... 211
North American Copper Co., Wyo..701, 862
North American Ore Co., Ont..... 211
North British Locomotive Co..... 534
North Duke Mine, W. A..... 372
North Fork Reduction Co., Idaho..... 900
North German Salt Association..... 585
North Mount Lyell Mine, Tasmania..... 252
North Pacific Society of Mining Engineers 577
North Pole Mine, Ore.217, 776, 782, 901, 1,061
North Star Mine, Tuolumne Co., Cal... 255
North Star Mines Co., Cal..93, 174, 178, 211, 531, 535, 619
North Star Silverton Mg. Co.,Colo..... 780
Northern Electrical Mfg. Co., Wis..02, 578, 858, 1,019
Northern Gold Mg. Co., Idaho..... 371
Northern Light Mg. Co., Colo..... 699
Northern Securities Co..... 458
Northport Sm. & Refg. Co., Wash..582,
Northwestern Improvement Co., Mont.. 661
Northwest Gold Mg. Co., Colo..... 375
Norwegian Mine, Cal.....214, 415
Norwood, C. J..... 412
Nosser, W. H., vs. Hugo Barrett..... 615
Notaway Gold & Silver Mg. Co.....96, 335
Nova Scotia Steel & Coal Co., N. S..98, 491
Nueva Australia Mine, Mex..... 937
Nueva Nacional Mine, Mex..... 532
Nuevo Cinco Senores Mine, Mex..... 411
Nuevo Porvenir Mine, Mex..... 937
Nugget Mine, Colo..... 780
Number Two South Great Eastern Mine. 31, 493
Nundydroog Mg. Co..... 532
Nutter, E. H..... 697
Nystrom, Erik 171

O

Oasis Gold & Copper Co., Utah..... 983
Oaxaca, Smelter for..... 937
O'Brien, J. M., vs. Grass Valley Con. Mg. Co., Cal..... 251
O'Brien & Rhoades, Colo.....453, 858
O'Connell Coal & Coke Co., Pa..... 901
Ohio & Colorado Sm. & Refg. Co..96, 256, 496, 536, 775
Ohio Copper Co., Utah..43, 97, 178, 258, 297, 497, 538
Ohio-Deadwood Gold Mg. Co., S. D..... 297
Ohio Filler & Shield Co., O.....1,058
Ohio Iron Men's Club..... 819
Ohio Iron & Steel Co.....1,026
Ohio Mine, Cal..... 134
Ohio Shippers' Association.....1,018
Ohio State University..... 413
Ohio-Tonopah Mg. Co., Nev..... 217
Oil Developments.94, 254, 414, 578, 738, 939
Oil Fields of Mexico Co., Mex..... 499
Oil Producers' Storage Co., Tex..... 337
O. K. Consolidated Mg. Co., Idaho..... 336
O. K. Mill, B. C..... 491
O. K. Mg. Co., Cal.....495, 738
Old Abe Mine, Mex..... 94
Old Boot Mine, Ariz..... 659
Old Bum's Tunnel, Cal..... 255
Old Colony Mg. Co., Mich..... 740
Old Dominion Copper Mg. & Sm. Co., Ariz..10, 98, 138, 178, 334, 495, 622, 663, 702, 738, 863
Old Dominion-United Globe Mg. Co. Consolidation, Ariz.....98, 138
Old Gold Mg. Co., Colo..136, 456, 536, 660, 699
Old Gregory Mine, Cal..... 980
Old Panamint Mine, Cal..... 454
Old Town Mine, Colo.....295, 415, 455, 579
Old Tuolumne Mine, Cal.....95, 660
Old Union Mg. & Milling Co., Colo..296, 496, 981
Oleta Mine, Cal..... 899
Oliver, Henry W..... 253
Oliver Iron Mg. Co..257, 296, 336, 416, 781, 815, 855, 860, 895, 1,016
Ollie Reed Mine, Colo....175, 295, 699, 820
O'Loughlin Copper Syndicate..... 657
Omaha Gold Mg. & Milling Co., S. D.. 862
Omar Gold Mg. & Tunnel Co., Colo.... 619
Omega Mg. Co., Cal.....174, 980
Omparisa Mg. Co., Cal.....1,058
Onderdonk Engineering Co., Colo..... 254
Oneida Mg. Co., Cal..174, 331, 334, 414, 491, 819
Oncko Gold Mines Co., Colo..... 255
Ontario Bureau of Mines Summer School Lectures 776
Ontario Corundum Co., Ont..... 24
Ontario Mg. Co., Utah.....178, 1,022, 1,061
Ontario Mg. & Sm. Co., Ont..... 331
Ontario, New Copper Smelter for..... 976
Ontario, New Mineral Locations in..... 656
Ontario, New Silver and Cobalt Deposits 371
Ontario Power Co..... 858
Ophelia Mine, Colo.....536, 660
Ophir Consolidated Mine, Colo.....215, 376
Ophir Hill Mine, Utah.....782, 1,022
Ophir-Lode Mining Syndicate, B. C..... 212
Ophir Mine, Cal.....414, 454
Ophir Mg. Co., Nev.....218, 622
Ophir Queen Mine, Utah..... 498
Ora Copia Mg. Co., Cal..... 175
Orado Gold Mg. Co., Colo.....415, 780
Ora Leva Mine, Cal..... 940
Ore Concentration Syndicate..... 413
Oreano Mg. Co., Idaho..... 821
Oregon Blue Mg. Co., Oregon..... 982
Oregon Mine, Mont..... 257
Oregon Mines Exploration Co., Oregon.1,061
Oregon Mg. & Development Co., Oregon. 337
Oregon Sm. & Refg. Co., Oregon...258, 1,061
Orelands Mg. Co., Minn..... 376
Orford Copper Co..... 373
Orient Coke Co., Pa.....337, 621, 862
Orient Mine, Wash..... 538
Oriental Mine, Cal.....95, 335, 739
Original Con. Mg. Co., Mont..... 297
Original Quartz Hill Mg. Co., Cal..819, 1,059
Orleans Bar Gold Mg. Co., Cal..... 255
Oro Blanco District, Ariz..... 36
Oro Blanco Mg. Co., Cal..... 859
Oro Denoro Mine, B. C..... 621
Oro Fino Mine, Cal..... 415
Oro Fino Mine, Oregon..... 861
Oro Hondo Mg. Co., S. D..... 45
Oro Plata Mine, Ariz.....1,019
Oroville Gold Dredging, Cal.....331, 816
Oroville Gold Dredging & Exploration Co., Cal.....331, 655, 695
Oroya-Brownhill Mg. Co., W. A..411. 492, 616, 856
Orphan Belle Mine, Colo.....296, 336
Ortega Mines, Mex..... 532
Osborn Mine, Idaho.....1,042
Osborne Mine, Ariz..... 578
Osceola Con. Mg. Co., Mich..216, 458, 537, 620, 740, 781, 821, 981, 1,062
Oswald Coal Mine, Ind..... 700
Oswego Mine, Idaho.....1,007
Otromina Mine, Colombia..... 492
Ottawa Mine, B. C..... 776
Otto Gas Engine Works, Del.....92, 819
Ottumwa Box Car Loader Co., Iowa.... 254
Ouray Smelter, Colo..... 175
Ovens River Dredging Co., Victoria.... 172
Ovens Valley Sluicing Co..... 657
Over Mine, Cal..... 495
Overland Mine, Utah.....942, 983, 1,022
Oversight Mine, Colo..... 175
Overstrom, G. A.....132, 897, 1,057
Overton Mine, Cal..... 579
Owen Sound Cement Works, B. C..... 576
Owens Mine, Cal.....95, 455, 660, 738, 940
Owl Creek District, Idaho..... 693
Oxbow Power Co., Mont.....534, 861
Oxnam, T. H.....253, 412, 617, 858
Oyster-Criterion Mine, B. C...133, 212, 291, 452, 532, 656, 696

P

Pacific Coast Borax Co., Cal.....135, 943
Pacific Coast Coal Co..... 895
Pacific Mine, Mont..... 217
Pacific Mineral Extraction Co., B. C... 251
Pacific Mines Co., Cal..... 135
Pacific Smelting Co., Cal..... 134
Pacific Steam Economizer Co., Cal.....1,058
Pacific Steel Co..491, 531, 532, 656, 660, 977
Pacific Steel Co. vs. T. H. Speddy..... 855
Pacific Transportation Co., Cal..... 132
Packard, Geo. A.....253, 697, 978
Packett, Leonard 744
Page, F. W..... 131
Page Mill, Colo.....615. 660
Pagnuelo Claims, Mont..... 297
Paine Mine, Cal..... 135
Pala Bithia Mines, Cal.....371, 455
Palagonite Mine, Cal..... 455
Palmer, Charles S..... 91
Palmer, Cortlandt E.....453, 818, 1,018
Palmer, Irving A..... 858
Palmer Mountain Tunnel Co., Wash....1,016
Palmillo Mine, Mex.....21, 696
Palotta Quadrangle, Ind..... 700
Palo Verde Mine, Cal..... 375
Pan-American Mg. & Sm. Co., Mex..576, 663, 736, 776
Panamint Valley District, Cal..... 454
Panhandle Sm. & Refg. Co., Idaho..... 860
Paradise Mine, Ariz..... 578
Paradise Mine, B. C..... 902
Paraffine Oil Co., Tex..... 177
Paragon Mine, B. C..... 783
Paragon Mg. & Mfg. Co., Idaho.....1,060
Park & Central Mine, Wash..... 983
Park City District, Utah..... 42
Park City Shipments, Utah..97, 297, 498, 538, 621, 822, 942, 1,022
Park Mine, Colo..... 579
Parker Mine, N. C..... 457
Parker, Sherman.....171, 411
Parkersburg Iron & Steel Co., W. Va.. 181
Parkin, Charles 938
Parnall, Samuel A.....91, 658
Parral, Mex., Smelter for..... 696
Parral Mines, Ltd., Mex.....582, 696
Parrish, F. E., Mine Purchase in Mexico 452
Parrish, S. F.....453, 818, 858, 897, 978
Parrot Silver & Copper Mg. Co., Mont.. 418, 975
Parsons, George 493
Patterson, G. Hutton..... 697
Patton, Albert 697
Paul, W. H.....91, 855
Payette River Mg. & Milling Co., Idaho.1,042
Paymaster Mine, Ariz..... 374
Payne Con. Mg. Co., B. C.....331, 616
Pay Roll Mine, S. D..... 538
Peabody Coal Co., Ill..... 661
Peabody, Gov..... 371
Pearce, Richard 211, 737
Pearce, R. Frank.....91, 697
Pearce, Stanley H..... 453
Pearl Con. Gold Mg. Co., Wash..178, 297, 338, 418
Pearl District, Idaho.....1,042
Pearse, Arthur L.....1,057
Pearse, Arthur L., vs. Gold Run Gravels, Ltd., Cal..... 531
Pearson, S., & Son, Mex.....777, 856
Pease Placer, Colo..... 135
Peck, Francis J..... 533
Pedricena Mine, Mex..... 696
Peerless Maud Combination, Colo...175, 579, 739, 1,020
Peerless Oil Co., Cal..... 375
Peggy Gold Mg. Co., Colo.....96, 580, 940
Pelican Mining Co., Colo..... 863
Pellew-Harvey, W.....1,057
Pellew-Harvey, Bryant & Gilman, B. C. 578
Pelton Water Wheel Co..... 534
Pemberton, H..... 897
Pencoyd Iron Works, Pa..... 413
Pendleton, Alexander G..... 493
Pengilly, John 131
Penhall, John 453
Penn Iron Mg. Co., Mich.....336, 416
Penn Mg. Co., Colo.....375, 739
Pennsylvania & New York Central Railroad 1,061
Pennsylvania Coal & Coke Co., Pa..537, 822, 982
Pennsylvania Engineering Co., Pa..... 778
Pennsylvania Mine, Mont..... 740
Pennsylvania Mg. & Sm. Co., Mo..... 136
Pennsylvania & Montana Mg. Co., Mont. 136
Pennsylvania Railroad Co.....585, 659, 819
Pennsylvania Salt Mfg. Co..... 422
Pennsylvania Steel Co..... 979
Pennsylvania Zinc Co., Pa..... 497
Penobscot Mg. Co., S. D..297, 457, 662, 700, 941
Penobscot Mg. & Milling Co., Colo..660, 899
Penoles Mg. Co., Mex.....22, 138, 776
Penrose Mine, Colo.....295, 335, 375, 496
Penrose, R. A. F.....172, 373, 658, 1,018
People's Coal Co., Pa.....901, 982
Percy Oil Co., Mex..... 251
Pereira Mine, Cal..... 899
Perkins Mine, Mich..... 416
Perkins, Walter G.....737, 978
Perro Blanco Mine, Mex..... 491
Perry, E. W..... 979
Perseverance Mg. Co., Alaska..... 75
Peters Tunnel, Colo..... 579
Peterson, H. T..... 858
Petre, Reginald W.....453, 1,018
Pettee, William H..... 898
Pettigrew, Charles 897
Pewabik Mg. Co., Mich..... 216
Peyton, A. J., & Co..... 576
Philadelphia Engineers' Club..131, 253, 293, 453, 1,018
Philadelphia & Reading Coal & Iron Co., Pa.....258, 621, 782, 862, 901, 982
Philadelphia Smelter, Colo..... 335
Phillips River District, W. A.....492, 777
Phillips River Government Smelter..... 134
Phoenix Con. Mg. Co., Mich..216, 257, 376, 580, 620, 781, 821, 982
Phoenix Mine, Ariz.....1,019
Phoenix Mine, Cal.....378, 456
Phoenix Mine, N. C..... 37
Phoenix Park Mine, Pa..... 901
Phoenix Reduction Works, Cal..... 659
Phosphor-Bronze Co., Pa..... 413
Pickands-Magee Coke Co., Pa..... 294
Pickands, Mather & Co.....296, 416, 895
Picton Lease, W. A..... 332
Piedmont Coal Co., Tenn.....1,061
Piedras Verdes Mine, Mex..... 532
Piegan Mg. Co., Mont..... 740
Pierce Mine, Colo..... 496
Pierce, Walter R..... 253
Pike, Oliver O..... 131
Pike's Peak Hydro-Electric Co., Colo... 173
Pilgrim Con. Mg. Co., Colo..... 620
Pilgrim Mine, Ariz..... 374
Pilgrims' Rest Mine, W. A..... 412
Pilones Mine, Mex..... 576
Pilot Gold Mg. Co., B. C..... 783
Pilot Mg. Co., Colo.....780, 1,020
Pine Brook Coal Mine, Pa.....700, 1,022
Pine Creek Mine, Idaho..... 336
Pine Creek Mining, South Australia.... 617
Pine Hill Mg. Co., Cal..... 976
Pine Mine, Cal..... 174
Pine Tree Mine, Cal.....1,020
Pinmore Mine, Cal..... 174
Pinney, Geo. M..... 451
Pinon Con. Mg. Co., Cal..... 331
Pinos Altos Mine, Mex..... 212
Pinyon Ridge Mg. Co., Utah..... 217
Pioneer Mine, Minn..... 781
Pioneer Tin Co..... 657
Pirsson, L. V..... 577
Pitt Iron Mg. Co., Minn..216, 336, 781, 860
Pittsburg & Duluth Development Co., Ariz. 174, 1,056
Pittsburg & Eastern Coal Co., Pa..337, 1,022
Pittsburg Builders' Exchange League.. 220
Pittsburg Coal Co..53, 54, 260, 340, 623, 982, 1,022
Pittsburg & Lake Erie Railroad..... 541
Pittsburg Mine, Ariz..... 980
Pittsburg Mine, Colo..... 900
Pittsburg Mg. Co., Cal..... 935
Pittsburg & Montana Copper Co., Mont. 217, 251, 620
Pittsburg Reduction Co.....20, 123, 606
Pittsburg & Southern Coal & Iron Co., Ala. 374
Pittsburg Placers, N. M.....1,060
Pittsburg Steamship Co..... 257
Pittsburg Steel Co.....341, 534
Pittsburg Terminal Railroad & Coal Co.1,024
Pittsburg Valve, Foundry & Construction Co., Pa..... 577
Piute Mg. Co., Cal.....1,058
Plata Mine, Ariz..... 454
Plumas Gold Mg. Co., Cal.....132, 491
Pluma Gold Mg. Co., S. D.....177, 862
Plymouth vs. Silver King Mine, Mont.. 961
Pneumatic Engineering Co., Pa..... 939
Pocahontas Con. Coal Co., W. Va.....1,062
Poker Flat Mine, Cal..... 255
Poland Extension Gold Mg. & Milling Co., Ariz.....36, 1,019
Pollard, William..... 737
Polaris Mg. Co., Ariz.....1,019
Pollock, Wm. B., Co., O.....,294, 939, 979
Pomeroy, William A..... 577
Poor Boy Con. Mine, Cal.....1,059
Pope, F. J.....1,018
Pope Tin-Plate Co., Pa..... 666
Poplar Creek District, B. C.....1,056
Porter, H. K., & Co., Pa..... 91
Portis Mine, N. C..... 168
Portland Cement Co., Colo..... 422
Portland Gold Mg. Co., Colo..98, 256, 580, 620, 660, 735, 780, 975, 1,015, 1,021, 1,059
Portland Mg. Co., B. C.....133, 498, 615
Porto Rico Mill, B. C..... 532
Portrero Smelters, Mex..... 133
Portuguese Mine, Cal.....135, 1,020
Port Wine Channel Mine, Cal..... 455
Porto Rico Mine, Cal..... 214
Posey, O. P..... 697
Potillo Mine, Cal.....1,020
Potter, W. B..... 213
Potter, William C.....1,057
Potts Mine, Pa..... 417
Powell, L. V..... 213
Power, F. Danvers..... 172
Power & Mining Machinery Co..92, 213, 294, 453, 577. 1,058
Powhatan Coal & Coke Co., Pa..... 337
Pozo Mine, Colo..... 135
Pratt Coal Co., Ala.....540, 784, 864
Pratt, Frank J..... 577
Pratt, Joseph Hyde.....212, 293, 617
Precious Metals Co., Mont..... 376
Premier Gold Mg. Co., Colo..... 255
Presa Nueva Mine, Mex.....94, 252
Prescott, Fred. M., Steam Pump Co., Wis. 254. 413
President Mine, Colo..... 739
Pressed Steel Car Co..... 945
Price, C. J.....253, 293
Price, E. Graham..... 978
Price, G. W., Co., Cal..... 213
Price, W. A.....697, 818
Pride of the West Mg. Co., Ariz..... 36
Prieto, Manuel A..... 533
Prince Mg. & Development Co., B. C.. 212
Princess Royal Gold & Copper Mg. Co., B. C..... 133
Princess Royal Mine, W. A..... 134
Pritchett, C. W..... 897
Prize Mg. Co., S. D..... 538
Probert, Frank H.....938, 1,057
Procunieur Mine, Colo..... 335
Prodigo Mine, Mex..... 491
Progressive Concentrating & Milling Co., Colo. 135, 660, 1,059
Promontorio Mine, Mex..... 372
Proske, T. H.....1,057
Providence Mg. Co., B. C.....1,062
Providencia Gold & Silver Mg. Co., Mex. 94, 701
Providencia San Juan de La Luz Mg. Co., Mex..... 372
Prudhomme Mine, Cal..... 780
Pryor Patent Excavator Tooth Co., Mich. 859
Pryor, Reginald C., Mining Land Option in Michigan..... 537
Psyche Mine, Oregon..... 782
Ptarmigan Mine, B. C..... 251
Puget Sound Reduction Co., Wash..... 74
Punch Creek Mine, Cal.....214, 660
Purington, Chester W.91, 577, 737, 751, 978
Purisima Mine, Mex..... 937
Puritan Gold Mg. Co., S. D.....662, 941
Puzzle Mine, Colo..... 536
Pyramid Mine, Cal.....1,020
Pyrite Smelters in Colorado..... 371

Q

Quadrilateral Mine, Colo..... 660
Quandary Mountain Mg. & Milling Co., Colo. 296, 1,059
Quartano, A..... 91
Quartz Hill Mine, Cal.....214, 779
Quartz Quarry Gold Mg. Co., Cal...535, 619
Quebradillas Mine, Mex.....576, 776
Queen Bee Mine, Ariz..... 698
Queen Bess Mine, B. C..... 332
Queen & Co., Pa..... 294
Queen Cross Mine, N. S. W..... 252
Queen Dominion Mg. Co., B. C..... 701
Queen of the Hills Mine, Idaho..... 416
Queen of the Hills Mg. Co., S. D..862, 941, 1,061
Queen Mine, Ariz..... 494
Queen Mine, B. C..... 532
Queensland Menzies Mine, W. A..... 134
Queen's Cross Mine, W. A..... 492
Quigley Mine, Cal..... 980
Quijotoa District, Ariz..... 36
Quilp Mine, Wash.....178, 498
Quimby Gold Mg. Co., Cal....899, 940, 1,020
Quincy Iron Mine, Minn..... 216
Quincy Mg. Co., Mich....176, 216, 256, 497, 580, 620, 740, 781, 900, 940
Quint, S. H..... 253
Quito Mine, Cal..... 619
Quo Vadis Gold Mg. Co., Colo..... 619

R

Racine Mg. Co., Colo..... 535
Radcliff Con. Mg. Co., Cal.....334, 454
Raddington Consols Mine, W. A..... 492
Radium Mine, Colo.....335, 375, 415
Ragsdale Coal Mg. Co., Ind..... 256
Raht, August 815
Railway & Electric Equipment Co..... 173
Rainbow Mine, Wash..... 942
Ralston, J. C.....617, 1,018
Rambler-Cariboo Mine, B. C.656, 1,016, 1,017
R. A. M. Mine, Colo..... 455
Ramrod Mine, Ariz..... 698
Ramsden, Percy..... 412
Ranchita Mine, Cal.....255, 738
Rancho Mine, Cal..... 698
Rand Collieries 533
Rand Drill Co..132, 254, 698, 737, 979, 1,019, 1,058
Ransome, F. L..... 453
Rattlesnake Mine, Cal..... 174
Ratton Mine, Ariz..... 534
Raunheim, S..... 262
Rawhide Mine, Cal.....411, 414, 451
Rayfield, J. W.....412, 979
Raymer, Geo. S..... 697
Raymond Con. Mines Co., Colo....536, 1,059
Raymond Granite Co., Cal..... 936
Raymond Mg. Co., Utah.....337, 377
Raymond, R. W.....131, 577
Rayne Planter Oil Well, La..... 496
Rayo Mine, Mex..... 776
Ray Tonopah Mg. Co., Nev..... 941
R. E. A. & A. Mg. & Milling Co., Colo. 860
Ready Bullion Mine, Cal..... 939
Ready Cash Mine, Colo.....295, 739
Reardon, D. M..... 91
Red & White Rose Gold Mg. Co., Rhodesia 616
Red Ash Mine, Pa..... 137
Red Bird Mg. Co., Mont.....700, 1,060
Red Boy Con. Gold Mg. Co., Oregon. 258, 491, 816
Red Cloud Mg. Co., Cal..... 491
Red Gold Mine, Cal.....738, 939, 1,058
Red Oak Mg. Co., Colo.....415, 1,059
Red Raven Gold Mg. Co., Cal.....1,020
Red Rock Mine, Mich..... 416
Red Slide Mine, Cal..... 819
Red Star Coal Co., Ala..... 578
Red Tape Mine, Cal.....859, 1,019
Red Top Mine, Nev..... 740
Redding Gold & Copper Mg. Co., Cal... 95
Redemption Mine, Ariz.....454, 534
Redfield Drill Co., Colo..... 131
Redwood Manufacturers' Co., Cal.....1,019
Reed, A. H..... 778
Reed Mine, Cal.....619, 1,059
Reeder, A. H..... 172
Reese Gold Discovery, Cal..... 175
Reeves Pulley Co., Ind..... 213
Refugio Mine, Mex..212, 372, 452, 642, 927
Regal Gold & Copper Mg. Co., Cal..... 135
Reid, Amos & Co., Ala..... 623
Reidt, Charles 91
Reilly, John 697
Reilly Ranch, Cal..... 334
Reindeer Mine, Colo.....375, 455
Reins Copper Co., Mont..... 217
Reliance Coal Co., Pa..... 740
Reliance Coal Mg. Co., Ind..... 536
Reliance Milling & Mg. Co., S. D..45, 137, 417, 901
Reliance Mine, Mont.....137, 700
Reliance Mg. Co., Colo..... 135
Relief Mill, B. C..... 856
Rensselaer Polytechnic Institute, N. Y. 979
Republic District, Wash., Smelting Charges 97
Republic Engineering Co., Pa..... 254
Republic Iron & Steel Co..100, 140, 257, 336, 340, 379, 416, 420, 500, 584, 665, 1,026
Republic Mine, Cal.....375, 780, 820
Republic Mg. Co., Wash..... 782
Republic Ore Shipments, Wash..137, 258, 338, 418, 457, 498, 538
Republic Power & Cyaniding Co., Wash. 217
Rescue Gold Quartz Mg. Co., Cal..375. 899
Reserve Mine, N. S..... 98
Restauradora Mg. Co., Mex..... 292
Resurrection Gold Mg. Co., Colo..295, 496, 579, 780, 860
Retallack, Leonard H..... 658
Revenue Mine, Colo.....215, 579, 900, 981
Revenue Mine, Utah..... 177
Revenue Mg. Co., Mont.....137, 661, 740
Revett, Ben Stanley.....533, 697, 938
Rex Mine, Colo..... 860
Reynolds, Irving H..... 91
Reynolds, Llwellyn 778, 858
Rhine Gold Mg. Co., Ariz..... 618
Rhodesia Mg. Co., Colo.....215, 820
Rhys, Vaughan 577
Riblet & Co., B C.....173, 534
Richard III. Mine, B. C..... 411
Richard, Robert H..... 577
Richards Mine, Pa..... 497
Richards Pump Co., Cal..... 334
Richie, H. C..... 173
Richmond Con. Mine, Idaho..... 136
Rickard, Edgar 577
Rickard, Forbes.....212, 577, 938, 1,057
Rickard, Harold 697
Ricketts, Guy..... 818
Ricketts, L. D.....131, 172
Ridgeway, George.....212, 293
Riedt, Carlos..... 412
Rio Grande Sampler, Colo..... 176
Rio Tinto Co., Spain.....616, 625
Rio Vista Mine, Cal.....95, 255
Riola Mg. Co., Ill..... 661
Rittenhouse Mine, Pa..... 97
Ritter Mine, Cal..... 738
River Hill Mine, Cal.....535, 899
Riverside Con. Mine, Cal.....939, 1,058
Rix Compressed Air & Drill Co., Cal.. 737
Roaring Creek & Charleston Railroad.. 413
Robinson Machine Co., Pa.....1,058
Rob Roy Mine, Idaho..... 940
Robbins, Frank.....212, 253, 978
Robbins, Percy A..... 938
Robellaz, Fernand.....253, 533
Robert E. Lee Mine, Colo..... 820
Robert Emmet Mine, Colo..... 255
Robert Emmet Mine, Mont.....257, 620
Roberts, E. J..... 453
Roberts, F. C..131, 293, 373, 412, 493, 818, 978
Roberts, James 617
Roberts, Malcolm 697
Roberts, W. B..... 333
Robinson, A. K., vs. Wm. Muir..... 735
Robinson Central Deep Mine, Transvaal 857
Robinson Deep Mine, Transvaal...937, 1,017
Robinson, George H.....213, 293, 658, 697
Robinson, J. R..... 131
Robinson Machine Co., Pa..... 898
Robinson Mine, Transvaal..... 701
Robinson, Reginald..... 493
Rock Creek Mg. Co., Idaho.....1,042
Rockwell, George J..... 658
Rockwell, Irving E..... 212
Rockwood Light, Power & Transportation Co., Colo..... 416
Rocky Fork Mine, Mont..... 941
Rocky Mountain Mine, Mont.....1,060
Rocky Mountain Smelter, Colo.....411, 455
Roderick Dhu Gold Mg. Co., Colo..215, 496, 660, 739, 940
Rodesino Mg. Co., Cal..... 779
Rodfish Mg. Co., Va..... 37
Roeder, Philip G., & Co., Mex..... 534
Roeser, E..... 858
Roessler & Hasslacher Chemical Co..... 342
Roger Boy Mine, Ariz.....374, 494
Rogers, Brown & Co..... 744
Rogers, E. M..... 373
Rohlfing, D. P..... 131
Roland, Walpole 253
Root, Norman A..... 658
Ropes Mine, Mich..... 537
Rosa Amaville Mine, Mex.....817, 977
Rosario Mine, Chihuahua, Mex..... 452
Rosario Mg. Co., Jalisco, Mex..... 93
Rosario y Anexas Mine, Oaxaca, Mex..1,017
Rose, G. W.....213, 412
Rose Mine, Mont..... 821
Ross & Alexander, Mo..... 740
Ross, C. A.....213, 658, 737
Roosevelt Mg. Co., Cal.....415, 619, 819
Rossiter Mine, S. D..... 538
Rossland Ore Shipments, B. C..98, 138, 178, 218, 259, 297, 338, 377, 458, 498. 538, 582, 621, 663, 701, 741, 783, 822, 863, 902, 942, 1,062
Rossland Power Co., B. C..24, 212, 582, 902
Ross Tin Deposit, S. C..... 538
Roudebush, Frank 533
Round Mountain Mine, Cal....295, 334, 779
Rowand, Lewis G.....1,057
Rowe, Anthony Stanley..... 94
Rowland, Samuel C..... 658
Roy Iron Co., Minn.....257, 296
Royal Con. Mines, Cal....93, 132, 171, 291, 295, 415, 454, 495, 578, 695, 775, 819, 1,058
Royal Mine, Ga..... 496
Royal Mine, Oregon..... 497
Royal Mg. & Investment Co. Colo..215. 335
Ruberta Mg. Co., S. D.....1,022
Rubicon Mine, W. A.....134, 212, 292, 657
Ruble Mines, Oregon..... 497
Ruby Basin Mg. Co., Colo..... 660
Ruby Gold & Copper Co., Mex..... 452
Ruby Gold Mg. & Milling Co., S. D... 97, 297, 862
Ruby Mine, Wash.....98, 217
Ruby Mg. & Milling Co., Nev..... 91
Rule Estate Mines, Mex.....292, 411
Rumble, George W.....896, 976
Russell, William 658
Rust, W. R..... 253
Rustler Mg. & Milling Co., Mont...177, 681
Ruth Mire, Ariz..... 534
Ruttman, Ferdinand 577
Ryan, John D..... 897

S

Sacramento Gold Mg. Co., Utah.97, 258, 702, 782, 862, 942
Sacramento Mine, Cal..... 819
Sacramento River Improvement, Cal.... 936
Sadie Mine, Cal..... 899
Safe Investment Mg. Co., S. D..... 862
Saginaw Mg. Co., S. D.....941, 982
Saguache Hydraulic Mg. Co., Colo..... 780
Sahuayacan Mg. Co., Mex..... 133
Sailor-Kamloops-Minnehaha Consolidation, B. C..... 776
St. Clair Explorations, Minn..... 296
St. Cloud Mine, Ariz..... 578
St. Domingo Mg. Co., Mont..... 137
St. Eugene Mine, B. C...171, 576, 701, 736
St. Joseph Lead Co., Mo....11, 14, 456, 821
St. Kevin District, Colo..... 295
St. Louis County Iron Ore Roads Taxes, Minn. 336
St. Louis-Ontario Mine, Utah.....1,061
St. Louis vs. Montana Mg. Co., Mont.. 781
St. Louis Sm. & Refg. Co., Mo..... 11
St. Mary's Mineral Land Co..338, 580, 620, 661, 900
St. Paul Civil Engineers' Society..... 494
Salar del Carmen Nitrate Co., Chile.. 954
Salero District, Ariz..... 36
Salisbury Steel & Iron Co., N. Y..... 254
Salmon River Gold Mg. Co., Idaho..... 336
Saltillo Mg. Co., Mex..... 178
Saltsburg Coal Co., Pa..... 621
Salvator Mine, Cal.. 819
Salvator Mine, Utah..... 702
Samoa Mine, Ariz. 659, 698, 980
Sampson Mine, Colo..... 96
Samson, Edgar 493, 658
San Andreas Gold Channel Co., Cal.939, 1,058
San Andreas Mines, Colombia..... 492
San Bernardino Desert, Cal., Artesian Well in 211
San Carlos Copper Co., Mex...618, 696, 977
San Diego Imperial Construction Co. vs. T. H. Speddy..... 855
San Dimas Mg. & Development Co., Mex. 292
San Domingo Mine, Cal..... 295
San Donato Nitrate Co., Chile..... 954
San Francisco del Oro Mine, Mex..... 372
San Francisco Mine, Ariz..... 494
San Jorge Nitrate Co., Chile..... 954
San Jose del Citio Stamp Mill, Mex.... 576
San Jose Mine, Cal..... 135
San Jose Mine, Mex..... 736
San Juan Mg. Co., Mex..... 736
San Juan Mg. & Leasing Co., Colo..... 699
San Juan Quicksilver Mg. Co., Cal..375, 579, 739, 980
San Juan Sm. & Refg. Co., Colo...175, 739
San Lorenzo Nitrate Co., Chile..... 954
San Miguel Mine, Peru..... 831
San Pedro, Los Angeles & Salt Lake Railroad 935
San Rafael-Grande Mine, Mex..... 491
San Salvador y Anexas Mine, Mex..133. 856
San Sebastian Mine, Salvador.....1,048
Sand Canyon Mine, Cal..... 174
Sanders, Augustus B..... 173
Sanders & Rising, Cal..... 698
Sanders, Wilbur E.....1,018, 1,057
Sandpile Mine, Cal.....34, 659
Sanford-Day Iron Works, Pa.....1,019
Sanford, Samuel.....577. 737
Sanger Mine, Cal..... 95
Santa Catalina Nitrate Co., Chile..... 422
Santa Clara Mine, Mex..... 736
Santa Claus Mine, Cal..... 174
Santa Cruz Mine, Mex..... 927
Santa Emilia Mine, Mex..... 576
Santa Eulalia Exploration Co., Mex.21, 372, 696
Santa Fe Gold Mines Co., Colo.....1,020
Santa Fe Mine, Nev..... 661
Santa Fe Mg. & Milling Co., Mex..178, 576, 937
Santa Fe Railroad..... 295
Santa Francisca Mine, Mex..... 21
Santa Ines Mine, Mex..... 776
Santa Lucrecia Mine, Mex..... 663
Santa Rita Mine, Mex..... 252
Santa Rita Mine, N. M..... 982
Santa Rosa Mine, Mex.....252, 977
Santa Rosa Nitrate Co., Chile..... 954
Santa Teresa Mine, Cal.....375, 739
Santa Ysabel Mg. Co., Cal....455, 780, 980
Santo Domingo Placers, Mex.....411, 937
Santiago Mine, Colo..... 335
Sao Paulo Tramway, Light & Power Co., Brazil 132
Saratoga Mine, Colo.....660, 975, 981
Saratoga Oil-Field, Tex.....177, 537
Sault Ste. Marie Industries, Reorganization of 531
Saunders, William L..... 533
Saux Head Mine, Mich..... 580
Sawpit Lead Carbonate Discovery, Colo. 416
Sawtooth Range, Alaska..... 414
Sawyer, J. G..... 858
Sayre Mg. & Mfg. Co., Ala..294, 339, 742, 902, 943
Scallon, William 213, 251
Scandia Mine, Oregon..... 621
Scheerer, Harold 778
Schiffner, C.....1,018
Schmidt, Carl 1,057
Schmitz, E. J.....453, 658
Schroter, George A.....412, 978
Schulz, Nicholas 979
Schulze, W. J..... 697
Schwab, Charles M..... 979
Schwarz Mine, Cal.....1,059
Schwartz, Theodore E..... 777
Schwerin, C. M..... 293
Schwerin, Martin.....697, 1,057
Scobey, Jesse 778
Scorpion Mg. Co., Nev..... 861
Scott, H. Kilburn.....293, 332, 737, 777
Scott, P. H..... 898
Scott, W. A..... 333
Scranton Mine, Minn..... 781
Seal of Gold Mg. Co., Cal.....295, 1,020
Seamless Tube Co. of America..... 341
Searchlight Mg. & Milling Co., Nev.... 661
Searl Mine, Colo..... 780
Sebben, E. W.....533, 658, 818, 858
Section Fifteen Mine, Mich.....900, 941
Security Mine, S. D..... 538
Sedalia Gold Mg. Co., Colo.....699, 981
Seddon, William C..... 658
Seelman-Daniels Mine, Minn..... 177
Seger Coal & Coke Co., Pa..... 497
Seixas, H. O..... 493
Sell Mine, Cal..... 415
Sellwood Leases, Minn.....376, 821
Semet-Solvay Co.....617, 623, 858
Seminole Mine, Cal..... 660
Seminole Mine, Ga..... 37
Senator Mine, B. C.....377, 538
Senator Mine, Colo..... 899
Senator Stewart Mine, Idaho..... 981
Seven-Thirty Mg. Co., Cal.....375, 414
Seven-Thirty Mine, Colo..... 175
Sevier Con. Mg. Co., Utah..... 581
Seward, John 373, 938
Sewell Mg. Co., Colo..... 699
Sextette Copper Mg. Co., Colo..... 335
Shady Creek Dredging Co., Cal....414, 940, 980
Shakespeare Mine, Ont.....259, 776
Shallcross, J. V..... 173
Shamokin Coal Co., Pa..... 97
Shannon Copper Co., Ariz.....10, 138, 452
Sharpe, A. J..... 131
Shattuck Mine, Ariz..... 255
Shaw Mine, Cal..... 95
Shawmut Mine, Utah..... 863
Shawmut-Nevada Gold Mg. & Milling Co., Nev..... 620
Sheba Mine, Cal.....255, 1,020
Sheba Mine, Nev.....1,060
Sheba Mine, Transvaal..... 452
Sheep Ranch Mine, Cal..... 779
Shelby Iron Co., Ala..... 783
Shenandoah Mine, Cal.....414, 454
Shepard, F. E..... 493
Sheppard, E. M..... 373
Sherman, Harold E..... 938
Sherpless, Fred. F..... 533
Sherwood Mine, Cal.....214, 859
Shinn Mine, Colo..... 375
Shipman, H. A..... 658
Shonk, John J..... 737
Shoshone Falls Power & Lighting Co... 494
Shriver, T., & Co., N. Y..... 534
Shroeter, Geo. A..... 253
S. H. Supply Co., Colo.....494, 778
Shurtleff, George F..... 938
Shuttleton Mine, N. S. W..... 372
Siebert, F. J.....658, 818
Sierra Buttes Gold Mg. Co., Cal..331, 579, 657, 660, 739, 899
Sierra de Oro Mine, Ariz..... 36
Sierra Queen Mine, Cal.....255, 375, 698
Silent Friend Mine, Colo..... 335
Silicate Stone Co., N. Y..... 364
Silliman, Edward S..... 818
Silver Bar Mine, Colo..... 495
Silver Bell District, Ariz..... 578
Silver Bell Mine, Colo..... 256
Silver Belt Mine, Mont..... 376
Silver Cliff Mine, Idaho..... 296
Silver Cup Mine, B. C.....133, 576, 736
Silver King Mg. Co., Utah.....42, 604
Silver King vs. Plymouth Mine, Mont.. 861
Silver Ledge Mine, Colo..... 780
Silver Plume Mines & Tunnel Co., Colo. 135
Silver Shield Mg. Co., Utah.....1,062
Silver Star Tonopah Mg. Co., Nev..... 457
Silver Wing Mine, Colo..... 296
Silverado Mine, Cal..... 980
Silverton Mg. Co., Colo.....416, 579
Silverton Ore Shipments, Colo..... 39
Silverton Tramway Co., W. A..... 372
Similkameen Falls, Wash..... 218
Simonds, F. M.....412, 493
Simpson, E. Lenox.....533, 858
Simpson, W. Evan..... 577
Single Standard Mine, Ariz.....1,058
Sirocco Engineering Co., N. Y..... 618
Siskiyou Mg. & Development Co., Cal.. 255
Sivyer, Leonard D.....91, 658, 858
Six Mile Mine, W. A..... 857
Sixteen-to-One Mine, Idaho.96, 136, 580, 735, 923, 1,021
Sizer, F. L.....332, 493
Skeels, Alfred 658
Skeeney Mg. Co., Mex..... 94
Skinneer, H. Ross..... 453
Skookum Mine, Idaho.331, 451, 781, 860. 976
Sligo Furnace, Minn..... 781
Slocan-Cariboo Mg. & Development Co., B. C. 291
Slocan Ore Shipments, B. C..... 171
Slocan Silver-Lead Miners' Association, B. C..... 291
Slocan Star Mine, B. C.....332, 936
Slocan Zinc Shipments, B. C..... 212
Slocum, F. L..... 172
Sloss-Sheffield Steel & Iron Co..100, 173, 180, 419, 420, 499, 534, 623, 704, 785, 944
Slough Creek, Ltd., B. C.....1,056
Smelting & Refining Co. of Australia.. 94
Smith, Albert W..... 818
Smith, Chas. A., vs. J. F. & F. H. Baker 775
Smith, Dupree 938
Smith, Fred D..... 577
Smith, Howard D..... 253
Smith, J. D. Audley..... 373
Smith Point Mine, Cal..... 95
Smuggler-Union Mg. Co., Colo..38, 215, 536
Smythe, S. R., & Co., Pa..... 213
Snarr, Barton, vs. Utah Con. Mg. Co., Utah 942
Snoqualmie Falls & White River Power Co., Wash. 618
Snow Creek Mine, Oregon..... 337
Snow Flake Mine, Colo..... 780
Snowshoe-British Columbia Copper Co. Consolidation.....171, 212, 378, 418
Snowshoe Mine, Idaho.....491, 536
Snowshoe Mine, Mont.....97, 336
Snowstorm Mine, Idaho..256, 661, 781, 816, 923
Snyder-Wood Mg. Co., Idaho.....1,021
Societe le Chrome 20
Societe le Nickel..... 20
Socrates Mine, Cal..... 896
Soldan Mg. Co., Cal.....859, 899
Soledad Mine, Mex..... 617
Solomon Mine, Ill..... 981

Solvay Process Co., Mich..... 342
Somera Mine, Mex..... 576
Somerset Coal Co., Pa..... 258
Sonemongon Mine, French Guiana..... 458
Sonoma Mine, Cal..... 534
Sonora Mg. Co., Mex..... 983
Sonora Oil & Development Co., Mex.... 977
Sons of Gwalia Mg. Co., W. A....897, 977
Soto Mine, Mex..... 937
Soudan Mines, Minn..... 296
Soulsby Mine, Cal..135, 415, 455, 495, 535, 660
Sour Lake Oil Field, Texas..137, 337, 537, 862
South Australia, New Copper Discovery. 252
South Broken Hill Mine, N. S. W..... 617
South Columbus Mine, Utah..... 862
South Dakota School of Mines.....939, 1,018
South Eureka Mg. Co., Cal.....95, 174, 819
South Eureka Mg. Co. vs. Vandament. 371
South Fork Mine Development Co., Cal.1,059
South Pass District, Wyo..... 41
South Sonora & Alamos Railroad, Mex.. 532
South Springs Hill Mine, Cal..... 95
South Swansea Mg. Co., Utah..... 622
South Westville Coal Co., Ill.....536, 580
South Yuba Mg. Co., Cal..... 859
South Yuba Water Co., Cal..... 95
Southern Cross Mine, Cal.....414, 535
Southern Mill, Mine & Railway Supply Co., Tenn..... 659
Southern Nevada Mg. Co., Nev..... 941
Southern Pacific Railroad Co..174, 179, 703
Southwest Missouri Mg. Co., Cal..... 255
Southwestern Glass Co., Cal..... 334
Southwestern Slate Co., Ark.....1,058
Sovereign Gold Mg. Co., Cal.....1,059
Spangler District, Cal..... 940
Spanish Ridge Mine, Cal..174, 334, 899, 980
Spar Copper Mines & Tunnel Co., Colo. 699
Sparta Mine, Oregon..... 861
Spaulding, Charles F..... 617
Spearfish Gold Mg. & Reduction Co., S. D.....45, 177, 297, 337, 457, 700, 941
Speculator Mg. Co., Mont..... 861
Speddy, T. H., vs. Pacific Steel Co. and San Diego Imperial Construction Co.. 855
Spelman, Hoyt..... 131
Spengler Mine, Cal.....495, 940
Spilsbury, E. G.....293, 1,057
Spilsbury, Percy G..... 938
Spinola Mine, Cal..... 980
Spitzee Mine, B. C..... 856
Spoker, Ellis C..... 131
Springfield Coal Mg. Co., Ill..... 981
Spring Hills Leeds Mine, Victoria..... 616
Spy-glass Mine, B. C..... 133
Stacy Mine, Colo..... 175
Stagg, E. H..... 858
Stahlknecht, E. H..... 858
Stallman, Otto 213
Standard Con. Copper Co., Ariz.....95, 138
Standard Con. Gold Mg. Co., Cal..139, 298, 499, 663, 738, 779, 823, 1,020, 1,023
Standard Electric Co., Cal..... 411
Standard Exploration Co..... 492
Standard Gold Mg. Co., Ga..... 900
Standard Gold Reduction Co., Colo..... 135
Standard Mine, Idaho.....176, 256, 661
Standard Mine, Oregon..... 782
Standard Oil Co..56, 132, 298, 491, 735, 822
Standard Oil Promotion & Investment Co., Cal.....251, 291
Standard Power Co., Utah..... 581
Standard Sanitary Mfg. Co., Pa.....1,065
Standart & McGill Mine, Cal.....1,059
Stanford, Richard B.....1,057
Stanley Mg. Co., Colo.....899, 981
Stanley River Tin Deposits, Tasmania.. 532
Stanton, Robert B.....617, 938
Star Con. Mg. Co., Utah..... 782
Star of Gilpin Mine, Colo..... 215
Stark Gold Mg. Co., Ariz.....174, 414
Star Mine, Cal.....780, 980
Star Mg. & Milling Co., B. C.....251, 331
Star Mine, Idaho.....1,007
Starr King Mine, Cal.....214, 455, 660
Starr Mine, Colo..... 660
Starr-Twinkle Mine, Colo..... 496
Station Equipment Co., Ill..... 213
Stauffer Chemical Co., Cal..... 422
Stayton Mine, Cal..... 255
Stearns, H. A..... 979
Stearns, J. W.....213, 617
Steel, A. A.....577, 818, 979
Steel Canyon Mg., Milling & Development Co., Colo.....215, 739
Steiffer, P. J., Co., Cal..... 738
Stein, C. Ernest..... 373
Stephens-Adamson Mfg. Co., Ill..... 898
Stephens, Frank G..... 818
Stern, Henry 333
Stevens Institute of Technology.....1,018
Stevens Mine, Colo.....135, 175, 415
Stevenson Mine, Minn..... 860
Stevenson Mg. & Development Co...740, 900
Stevenson Oil-Field, B. C.....817, 856, 1,056
Stewart & Co., Colo..... 739
Stewart Mine, Idaho..... 940
Stewart Reduction Works, Cal..... 415
Stickney, Charles Wade.....1,018
Stillwell Tunnel, Colo..... 176
Stilwell-Bierce & Smith-Vaile Co...132, 658
Stirling Mine, Pa..... 901
Stockett, Thomas R..... 91
Stockton Gold Mg. & Milling Co., Utah. 662, 700, 782
Stockton Hill Mine, Cal.....214, 414
Stockton Hill Mg. Co., Ariz..... 454
Stoiber, Edward G..... 697
Stoneham, W. J..... 658
Stonewall Mine, Cal.....292, 1,020
Storrs Mine, Pa..... 258
Stouts's Mountain Coal Mines, Ala..... 540
Stow, A. H..... 131
Strange, H. F..... 373
Strange, V. P 453
Strap, Gaston 1,057
Stratton Estate, Colo.378, 416, 456, 499, 663, 735, 781, 855, 895, 935, 1,015
Stratton's Independence, Colo...38, 39, 172, 176, 241, 251, 291, 376, 536, 781, 815, 975, 1,015
Straughan Mine, Cal..... 659
Stray Dog Mine, Utah..... 662
Stretch, Richard F..... 617
Stretch, R. H.....1,057
Stribbling Oil Well, Tex.....337, 498
Stromberg-Carlson Telephone Mfg. Co.. 979
Strong Gold Mg. Co., Colo..... 376
Struthers Furnace Co., Pa.....1,026
Struthers, Joseph..... 577
Sturgis Mine, Oregon.....258, 497
Sturtevant, B. F., Co., Mass....92, 294, 374, 534, 618, 778
Stutchbury, M. S..... 577
Success-Meeker Mine, Colo..... 96
Suckertown Mine, Cal..... 294
Sugar Loaf Mg. Co., Ind.....336, 900
Sullivan & Co. Mine, Cal.....1,058
Sullivan, A. J..... 372
Sullivan Group Mg. Co., B. C..817, 983, 1,016
Sullivan Machinery Co., Ill...494, 618, 658, 778, 858
Sulphide Corporation.....372, 493, 857
Sulphur Springs District, Colo.....1,020
Sultana Mine, Ont.....531, 1,056
Sultana Mg. Co., Cal..... 619
Sultan Mine, Ariz..... 414
Summer School of Mining..... 979
Summerville Mine, Cal..... 619
Summit Placer Mg. Co., Utah..... 418
Summit View Mine, Cal..... 899
Sumpter Mine, Oregon..... 137
Sunbeam Mine, Ont..... 936
Sunbeam Mine, S. D..... 942
Sunburst Mine, Colo..... 780
Sunday Lake Mg. Co., Mich.....376, 941
Sunflower Mine, Cal..... 295
Sun & Moon Mine, Colo.....92, 132, 171
Sunny Slope Gold Mg. Co., N. M..... 661
Sunnyside Mine, Cal..... 375
Sunnyside Mine, Colo..... 416
Sunnyside Mine, Idaho.....456, 1,021
Sunrise Mine, Ariz..... 899
Sunset Mine, B. C..... 371
Sunset Mg. Co., Cal.....896, 976
Sunshine Mine, Cal..... 738
Sunshine Mine, Colo..... 335
Sunshine Mine, Utah.....1,061
Superior Copper Mine, Ont..... 531
Supply Mine, Cal.....295, 738
Surprise Mg. Co., Mont..... 620
Susquehanna Coal Co., Pa..... 741
Susquehanna Iron Co.....781, 821
Sussman, Otto 617
Sustersic, Fernando 978
Sutherland, J. W..... 818
Sutherland Reef Co., Transvaal..... 452
Sutter Mg. Co., Cal..... 491
Sutton, Daniel Carroll..... 697
Sutton, William E..... 373
Swallow & Hopkins Explorations, Minn. 416
Swallow Tail Mine, Colo..... 699
Swanker, J. Edward..... 173
Swansea Mine, Cal..... 859
Swansea Mg. Co., Utah.....1,062
Swede Mine, B. C..... 133
Sweden, Electric Iron Smelting In..... 776
Sweepstake Mine, Cal..... 93
Sweetwater Mg. Co., Cal..... 174
Swift Current Oil Co., Mont..... 457
Swindler, Frank P..... 293
Swinney, Alfred J. G..... 91
Swords Creek Coal Co., W. Va.....1,062
Sygun Mine Case, North Wales..... 896
Sykes, Richard 131
Sylvania Gold Mines Corporation, Colo.. 579
Sylvanite Tunnel Co., Colo..... 415
Syndicate Milling Co., Wash..... 735
Syndicate Mg. Co., Cal..295, 298, 499, 663, 1,020 1,023
Syndicate Mg. Co., Ont..... 896
Syracuse Smelting Works, Can..... 413

T

Tabasco Oil Co., Mex..... 492
Tabor Mine, Cal..... 820
Tacoma Smelter, Wash..... 93
Taft, H. H..... 858
Tahama County, Cal., Dredging..... 214
Tainter Mine, Cal..... 579
Tairua Broken Hills Mine, N. Z..... 493
Takilma Sm. Co., Oregon..... 497
Talisman Mine, Utah..... 177
Talmage, A. A..... 938
Tamarack Mg. Co., Mich..256, 497, 537, 580, 620, 661, 740, 781, 821, 900, 941
Tanghe vs. Lucky Jack Mine, B. C..... 696
Tannenbaum & Co..... 93
Tarbox Mg. Co., Idaho..... 416
Tarbutt, Percy 938, 977
Tatum, Lawrence W..... 332
Taylor & Bird Mines, Ariz..... 414
Taylor & Brunton Sampler, Mont..... 700
Taylor Creek District, Cal.....940, 1,020
Taylor, Irving A..... 777
Taylor, John 532
Taylor, N. & G., Co., Pa..... 939
Tays, E. A. H.....173, 333
Teats, E. H..... 332
Tecolotes Mg. Co., Mex..... 21
Teldthusen Mine, Cal..... 294
Telegraph Mine, Ariz..... 618
Telegraph Mine, Cal.....899, 1,020
Telluride District, Colo., Mining..... 39
Telluride Labor Situation, Colo..92, 331, 335, 371, 411, 451, 455, 615, 655, 815, 820, 1,015
Tellurium Mine, Oregon..... 377
Temescal Mine, Cal.....135, 375, 980
Temiskaming & Northern Ontario Railway 531
Tempest-Apex Mg. Co., Colo..... 256
Temple Iron Co..... 863
Ten Better Mine, Nev.....1,022
Tenderfoot Mine, Colo.....620, 699
Tennessee Coal, Iron & Railroad Co... 100, 179, 220, 261, 339, 340, 379, 541, 584, 704, 819, 898, 903, 944
Tennessee Copper Co., Tenn..... 98
Tennessee Mine, Ariz..... 454
Tennessee Phosphate Co., Tenn..... 423
Tenth Legion Mine, Colo..... 619
Teralho Mine..... 493
Terhune, Richard H.....658, 938
Terrible Mine, Colo..... 780
Terror Mine, Colo..... 660
Terry, L. M..... 91
Tesla Mine, Cal..... 935
Tesora Mg. Co.....237, 296, 781
Tetro Mg. Co., Utah.....498, 741
Texas Mg. & Milling Co., Mex..... 133
Texas Oil Co., Texas..... 497
Tezuitlan Copper Co., Mex..... 251
Thacher, Arthur 212
Thames District, New Zealand..... 98
Thames Improvement Co., N. Z..... 857
Tharsis Sulphur & Copper Co..... 696
Thayer, B. B.....91, 735, 897
Thew Automatic Shovel Co., O..... 659
Thies, Adolf..... 533
Thies, Ernest A..... 533
Thomas, C. W..... 413
Thomas, D. R..... 818
Thomas, F. A..... 938
Thomas, George C..... 897
Thomson, F. A.....979, 1,018
Thorne, W. E..... 979
Thorp, F. P..... 979
Three Stars Mine, Cal...495, 619, 659, 899, 1,059
Thunder Mountain Pearl Mine, Idaho.. 456
Thunder Mountain Wagon Road, Idaho. 816
Thyng, W. S.....533, 617
Tibbey, Benjamin 697
Tiger Mine, Colo..... 496
Tiger vs. Nancy Hanks Mine, Mont.... 297
Tillie Copopsy Mine, Cal..... 255
Tillotson-Cram Mine, Oregon.....1,061
Tilly, Alfred 897
Tilt Cove Copper Co., Newfoundland... 937
Tindall, W. F. P..... 938
Tintic District, Utah, Mining..... 43
Tintic Shipments, Utah..177, 217, 258, 337, 377, 418, 457, 498, 537, 581, 621, 700, 741, 782, 822, 862, 901, 942, 983, 1,022, 1,061
Tinton Tin Mg. Co., S. D..... 862
Tin Workers' International Protective Association 1,065
Tin Top Mine Cal..... 820
Tip Top Mine, Ont..... 491
Tirrill Gas Machine Lighting Co..... 413
Toad Mg. Co., Cal.....375, 535
Tobin Mine, Mich.....740, 1,021
Toledo Mine, Mont..... 177
Tomahawk Mine, Colo.....1,059
Tomboy Gold Mines Co., Colo..96, 215, 256, 535
Tombstone Con. Mines Co., Ariz....324, 618
Tombstone District, Ariz..... 36
Tom Thumb Gold Mg. Co., Wash..178, 491, 662
Tonge, Thomas 533, 577
Tonkins Mine, Cal.....1,059
Tonopah-Belcher Mg. Co., Nev..... 177
Tonopah-Belmont Development Co., Nev. 177, 217, 457, 621
Tonopah-Crown Point Mg. Co., Nev.... 941
Tonopah Extension Mg. Co., Nev..258, 497, 740
Tonopah Gold Mountain Con. Co., Nev. 457, 740, 941
Tonopah Milling, Mining & Development Co., Nev.....97, 217, 497, 621, 941
Tonopah Mg. Co., Nev..... 782
Tonopah Monarch Mg. Co., Nev..... 177
Tonopah Railway, Nev..... 97
Topping, John A.....1,026
Toronto Mine, Colo..... 820
Torphy, M..... 938
Torreon Metallurgical Co., Mex.....212, 776
Torrey Exploration Co., Colo..... 96
Totoral Mg. Co., Bolivia..... 354
Tourmaline Mines, Cal.....93, 579
Tournay, Alexander 858
Town Tonics Gold Mg. Co., Colo...660, 859
Towne, Robert S..... 333
Townsend, Arthur R..... 253
Towrey, Edward 412
Trachyte Mine, Colo..... 136
Tracy, T. H..... 253
Trade Dollar Extension Mg. Co., Idaho. 215
Traders Mine, Mich..... 900
Trail Tunnel, Colo..... 136
Transvaal Commissioner of Mines..... 818
Transvaal Copper Co., Mex..... 252
Transvaal, Diamond Mining.....452, 857
Transvaal, Good Friday Mining Regulations 818
Transvaal Mg. Co., Mex.....1,056
Traverse City Gold Reef Co., Ont..936, 1,056
Treadwell, John C..... 577
Treadwell Mine, Cal..... 819
Treasure Hill Mg. Co., Ariz..... 534
Treasure Vault Mine, Ariz..... 494
Treasury Tunnel & Mg. Co., Colo..296, 375, 780
Treloar, P. Q..... 818
Trenam, J. J..... 697
Trerise, J. H.....575, 615
Tres Mercedes Mine, Mex..... 372
Treweek, John 412
Trezona, Charles 173
Tribullion Sm. & Development Co., Mich. 620
Tribune Mg. & Leasing Co., Colo..... 496
Trigg, W. W.....91, 938
Trilby Mine, Colo..... 176
Trimountain Mg. Co., Mich...256, 298, 376, 497, 537, 620, 781, 821, 900
Trinidad Mine, Mex..... 452
Trinity Mg. Co., Cal..... 578
Trinity River Mining, Cal.....780, 855
Tripp, H. T..... 858
Triune Mine, B. C..... 736
Truscott, S. J..... 777
Tuber Mine, Cal..... 454
Tulle Belle Mg. Co., Cal..... 214
Tultenango Mine, Mex..... 252
Tuolumne Mine, Cal..... 495
Turkey Hill Con. Mg. Co., Cal.....735, 779
Turnagain Arm Mg. Co., Oregon..... 217
Turnbull, J. J.....1,018
Turnbull, J. M..... 131
Turner, G. B. D.....332, 777
Turner, H. W.....212, 577, 617, 737
Turner, W. J., vs. Thomas A. Fee..... 896
Turney Iron Ore Land, Minn..... 816
Tuttle, H. E..... 777
Tutweiler Coal & Iron Co., Ala..... 744
Twenty Mine, Colo..... 620
Twin Buttes Mg. & Sm. Co., Ariz..... 659
Twin City Development Co., Colo..... 780
Twin Lakes Placer Co., Colo..... 620
Two Brothers Mine, Cal..... 135
Twolick Creek Coal Co., Pa..... 700
Twolon Mg. Co., Colo..... 335
Tycoon Mg. Co., S. D..... 417
Tyee Copper Co., B. C..171, 251, 695, 736, 776, 902, 1,016
Tyler, C. C..... 938
Tyrrell, J. B..... 777

U

Uitlanders' Election, Transvaal..... 94
Umatilla Mine, Mont.....1,060
Uncle Sam Con. Mg. Co., Utah..97, 98, 178, 862, 901, 983, 1,022
Uncle Sam Mine, Oregon..... 377
Uncle Sam Mine, S. D.....45, 941
Union Coal & Coke Co., Colo..... 136
Union Con. Mg. Co., Colo..... 136
Union Con. Mg. Co., Nev..... 419
Union Extraction & Reduction Co., Colo. 780, 895
Union Jack Mine, B. C..... 171
Union Metallic Cartridge Co., Conn.... 413
Union Mine, Cal.....214, 334, 495
Union Mine, Idaho..... 580
Union Mine, Mont..... 177
Union Oil Co., Cal..... 415
Union Oil Co., La..... 496
Union Steam Pump Co., Mich..... 174
United Alkali Co.....542, 576
United Coal Fields, B. C..... 656
United Copper Co., Mont..... 41
United Elkhorn Mine, Oregon.....1,061
United Exploration Co., Oregon.....258, 417
United Globe Mines, Ariz..... 839
United Globe-Old Dominion Mg. Co. Consolidation 98, 138, 178
United Gold & Copper Co., Cal..... 495
United Iron Works, Cal..... 254
United Lead Co., N. Y.....11, 333
United vs. Londonderry Gold Mg. Co., Colo. 895
United Metals Selling Co., N. Y..... 706
United Mexican Mg. & Milling Co., Mex. 737, 817, 1,017
United Mine Workers of America..134, 340, 531
United Mine Workers vs. M. T. Wilson. 661
United Mines Co., Colo..... 699
United Mines & Development Co...452, 534, 620, 780
United Oil Fields Co., Texas..... 498
United Oil & Refining Co., Tex..... 662
United States Arsenic Mines Co., Va... 74
United States Geological Survey Hydrographic Branch in Colorado..... 775
U. S. Grant Mine, Mont..... 337
United States Legal Corporation, W. Va. 582
United States Malleable Iron Co., O... 534
United States Mica Co., Colo..... 175
United States Mg. Co., Utah..42, 97, 137, 178, 217, 258, 337, 377, 418, 457, 498, 538, 581, 621, 662, 701, 702, 741, 782, 822, 862, 901, 942, 983, 1,022, 1,023, 1,061
United States Mg. & Dev. Co., Colo.... 531
U. S. Oil Developments....94, 254, 414, 578
United States Reduction & Refg. Co... 59, 135, 535
United States Sanitary Co..... 454
United States Steel Co., Mass..... 939
United States Steel Corporation..2, 67, 98, 100, 140, 180, 181, 220, 296, 333, 380, 421, 502, 584, 666, 705, 743, 815, 822, 865, 905, 985, 1,016, 1,055
United States Tin Mg. Co., Cal..... 980
United Tonopah Mg. Co., Nev..... 537
United Verde Copper Co., Ariz..... 174
United Zinc Companies, Mo..... 138
Unity Mine, Cal..... 819
Universal Drafting Machine Co., O.... 454
Urijay, G. F., Oil Concessions in Mexico 856
Utah & Eastern Copper Co., Utah..... 862
Utah-Apex Mine, Utah..... 217
Utah Con. Mines Co., Utah..42, 97, 98, 137, 178, 217, 258, 337, 377, 418, 457, 498, 538, 539, 581, 621, 662, 701, 741, 782, 822, 862, 901, 942, 983, 1,015, 1,022, 1,023, 1,056, 1,061, 1,062
Utah Con. Mg. Co. vs. Barton Snarr... 942
Utah Copper Co., Utah..43, 217, 258, 337, 377, 701, 822, 935
Utah Mg. Co., Fish Springs, Utah..297, 418, 539, 741, 823
Utah Ore and Bullion Settlements..700, 982, 1,022
Utah, Ozokerite Mines..... 418
Utah Salt & Soda Co., Utah..... 585
Utica Mg. Co., Cal.....899, 1,058
Utter, George H..... 737

V

Vacas-San Marcos Mg. & Milling Co., Mex. 576
Valencia Estate, Mex..... 411

Valkyrie Lease, W. A..... 411
Valley Center Lead Mine, Cal..... 535
Valley Creek Mine, Idaho..... 740
Valley Mine, Colo..... 699
Val Verde Copper Co., Ariz.....618, 1,019
Van Allen Mines, Cal..... 738
Van Barries, W. J.....1,057
Van Brunt Mine, Cal..... 135
Van Cleve, A. Howell..... 412
Van Cortlandt, E. N.....91, 412, 897
Vandament vs. South Eureka Mg. Co., Cal. 371
Vanderbilt Mine, Colo..... 175
Van Ee, J. C. Kemp, vs. J. S. Hamilton 695
Van Ness, William W..... 253
Vega Mine, Colo..... 496
Veith Mine, Cal..... 495
Velardena Mg. & Sm. Co., Mex..292, 413, 817
Ventress, Henry 1,018
Venture Corporation.....172, 337
Vercoe, H. B..... 737
Vermilion Range, Iron Ore Explorations 296, 1,060
Verona Mine, Mich.....176, 416
Verrill, C. S..... 979
Vesuvius Mine, Wash..... 258
Veta Grande Mine, Mex.....1,017
Vicaire, Andre 978
Victor Fuel Co., Colo..... 136
Victor Mine, Cal..... 859
Victor Mine, Colo..... 940
Victoria, Gold Dredging..... 657
Victoria Mine, Colo..... 780
Victoria Mg. Co., Mex..... 332
Victoria Mg. Co., Mich..178, 376, 456, 537, 781, 941
Victoria Mg. Co., N. Z..... 576
Victoria Mg. Co., S. D..... 862
Victory United Mine, W. A..... 332
Vidler Mine, Colo..... 780
Vindicator Con. Gold Mg. Co., Colo.536, 680, 620
Vine Spring Mg. Co., Cal..... 295
Viola Mine, Mont..... 177
Virginia-Carolina Chemical Co..57, 461, 666, 705, 866
Virginia Dale Mine, Cal.....1,020
Virginia Mine, Ariz.....494, 698, 980
Virginia Mine, Oregon.....337, 621
Virginius Mine, Colo..... 699
Virgoe, W. H..... 697
Vivandiere Mine, Colo..... 780
Vivian & Concord Mine, Cal..... 214
Viznaga Gold Mg. Co., Mex..... 133
Vogel, Felix A.....332, 938, 1,057
Volcanic Mg. & Developing Co., Mich.. 776
Vonich Mine, Cal..... 414
Voorheis, E. C..... 453
Vulcan Coal Mg. Co., Ind..... 256
Vulcan Iron Works.....494, 898
Vulcan Mine, Colo..... 175
Vulcan Mine, Oregon.....258, 497
Vulcan Townsite & Mg. Co., Colo..... 619

W

Wabash Mine, Utah.....418, 741
Wadwaso Mg. Co., Colo..... 620
Wagner, Martin 818
Waif Mine, Cal..... 739
Waihi Mg. Co., N. Z..98, 389, 576, 658, 736, 994
Waiotahi Mine, N. Z..... 98
Waldorf Mg. & Milling Co., Colo..... 175
Waldo Smelting & Mg. Co., Ore....417, 728
Walker, John..... 938
Walkers, Parker & Co., Eng..... 492
Wallace, H. Vincent 332, 697
Wallace Mg. Co., Colo....256, 536, 699, 739
Wallaroo & Moonta Mg. Co., S. Aus.. 372, 533, 857
Wallaroo Smelting Works, S. Aus.252, 657
Waller, H. T..... 777
Waller Mine, Cal..... 375
Walling & Muller Mine, Cal..... 819
Wall Street Mining & Stock Exchange, N. Y.....138, 218
Walsen, Edward 253
Walters, Howard C.....1,018
Waltham Mines, Colo.....496, 820, 899
Wano Mine, Colo..... 135
War Eagle Mg. Co., B. C..... 377
Ward, H. H..... 91
Ward Mine, Cal.....1,020
Ward Mine, Colo.....335, 619
Ward-Struggler Mine, Colo.....1,059
Warlock Mg. Co., Cal.....859, 940
Warner-Quinlan Asphalt Co..... 218
Warner's Ranch Mine, Cal..... 940
Warren, Arthur 658
Warren, B. H..... 493
Warren Peak Mines Co., S. D..... 942
Warren, Wesley W..... 253
Warwood Tool Co., W. Va..... 778
Washington Copper Co., Mich..... 378
Washington County Coal Co., Pa..... 337
Washington Mine, Colo..... 739
Washington, Ore Freights..... 217
Washington Water Power Co..... 936
Washoe Smelter, Mont.....257, 695
Wasp No. 2 Mg. Co., S. D..337, 497, 901. 1,061
Waterloo Con. Mg. Co., B. C.....133, 491
Waters, Albert L.....778, 858
Waters-Pierce Oil Co . Mex..... 491
Watseka Gold Mg. Co., Mont.....42, 137
Watsonville Oil Co., Cal..... 255
Watts, W. L..... 533
Wauconda Mg. Co., S. D..... 700
Waverly Mg. Co., Mo..... 740
Waylor, John A..... 697
Way Up Mine, Mont.....1,022
Wealth of Nations Mine, N. Z..... 493
Webb, H. H..... 373
Webb, W. Morton..... 897
Weber, F., & Co., Pa..... 659
Weber Gas & Gasoline Engine Co..254, 659
Webster, E. H..... 778
Webster Mfg. Co..... 698
Wedge Mine, Cal.....1,020
Weed, Walter Harvey....293, 617, 697, 1,057
Weeks, F. D.....213, 533, 617
Weeks, John L..... 697
Weiser, Idaho, Smelter for..... 176
Weiss, Franz 213
Welch-Lofttus Rare Metals & Uranium Co., Utah 621
Welch, Max J.....453, 897
Wellington Colliery Co., B. C.....171, 695
Wellman-Seaver-Morgan Co., O.....173, 413
Wells, Bulkley 412, 735
Welsh, Norval J..... 533
Wenstrom, Olaf 332, 938
Wentz & Co., Pa..... 258
Werdenhoff Mine, Idaho..... 740
West, Arthur 697
West End Coal Co., Ill..... 981
West End Mg. Co., Nev..... 497
West Gold Hill Mg. Co., Colo.....579, 699
West, H. E..... 91
West Quincy Mine, Utah..... 581
West of Scotland Mine, Queensland..... 31
West, Thomas W..... 332
West Virginia Con. Gold Mg. Co., Colo. 535
West Vulcan Mine, Mich..... 740
Westcott, Charles T..... 658
Western Employees' Investment Co.... 893
Western Federation of Miners..92, 251, 531, 695, 855, 895
Western Federation of Miners in California 211
Western Fuel Co., B. C.....291, 936
Western Mg. Co., Cal..... 174
Western Mg. Co., Colo..... 96
Western Pacific Railroad..... 895
Western Union Oil Co., Cal..... 415
Westheimer, N..... 897
Westinghouse, Church, Kerr & Co..173, 371
Westinghouse Machine Co., Pa.....294, 939
Wetherill Separating Co., N. Y..... 697
Weyant Mine, Idaho..... 661
What Cheer Mine, Cal..... 819
Wheeler, E. A..... 212
Wheeler Mine, Cal.....295, 495
Wheeling Mold & Foundry Co., W. Va. 825
Wheelock, C. W.....617, 1,057
Wheelock, Charles W., Jr..... 412
Wheelock, George W..... 777
Whirlpool Mg. Co., Wash.....1,016
White Bear Mine, Cal..... 899
White Bear Mg. Co., B. C..212, 373, 776, 783
White Cloud Mine, Cal..... 940
White, E. L..... 737
White Feather Mine, W. A..... 617
White, Francis G.....1,057
White, Franklin 373
White, H. B..... 777
White Iron Lake Iron Co., Minn..... 416
White, J. G., & Co., N. Y..... 213
White Knob Copper Co., Idaho.416, 418, 539
White, Q. A..... 332
White Rock King Mine, Cal..... 495
White Tanks Mg. Co., Ariz..... 454
White, W. T..... 412
Whitewater Deep Mine, B. C..... 172
Whiting Foundry Equipment Co., Ill... 778
Whitlach Mg. Co., Mont..216, 336, 417, 681, 1,060
Whitley, C. W..... 173
Whitman Mg. Co., Idaho.....1,042
Whitmore, L. F.....778, 858
Whitmore Mine, Cal.....134, 859
Whitney & Brucknes, Mex..... 736
Whitney Co., N. C..... 37
Whitney Mine, Cal..... 859
Whitney Mine, Colo..... 780
Widdas, Percy 818, 897
Wide Awake Mg. Co., Cal.....134, 214
Wide West Mine, Idaho..... 136
Wilbur-Womble Mg. Co., Cal.....495, 779
Wilcox, James 453
Wilcox Mine, B. C..... 817
Wild Bear Tunnel, Cal..... 214
Wild Bill Mine, Utah..... 982
Wild Bear Mine, Cal..... 135
Wild Cat Mine, Colo..135, 175, 295, 335, 496
Wild Goose Mine, Cal.....659, 738
Wild Goose Mg. Co., Alaska..... 898
Wild Horse vs. Londonderry Mine, Colo. 660, 699, 739, 780, 900
Wild Horse Mine, Colo..... 940
Wild Rose Mine, Idaho..... 136
Wildman Con Mg. Co., Cal....95, 1,020 1,058
Wiley Iron Mine, Ont..... 656
Wiley, W. H.....332, 533
Wilfley, Arthur R..... 533
Wilhelm, P. H..... 294
Wilkes-Barre Mg. Co., Colo..... 415
Wilkins, L. H 1,018
Willard Mine, Cal..... 135
William Jackson Mine, Cal..... 779
Williams, H. K..... 818
Williams, Henry S..... 333
Williams Iron Co., Ont.....259, 531
Williams, John 533
Williams, J. C..... 176
Williams, Parley L., Jr.....131, 617
Williams Patent Crusher & Pulverizer Co., Ill..... 213
Williams, Percy..... 373
Williams, S. Herbert..... 253
Williams, W. John..... 131
Williams, W. Yolen..... 936
Williamsville Coal Co., Ill..... 536
Willow Creek Mg. Co., Mont..... 97
Wilmington & Springfield Coal Co., Ill.. 740
Wilson, E. J.....1,057
Wilson, G. B..... 373
Wilsoa, Homer 453
Wilson, J. R..... 737
Wilson, M. T., vs. United Mine Workers 661
Winchell, Horace V..... 172
Winchester Mg. Co., Colo..... 699
Wind Rock Coal & Coke Co., Tenn....1,061
Wing Placers, Mont.....1,021
Winnemuck Mine, Utah..... 457
Winnipeg Mine, B. C..... 133
Winona Mg. Co., Mich..256, 497, 580, 620, 781, 941
Winslow, Arthur.....253, 493, 617, 737
Winston & Dear, Minn..... 941
Winthrop Mine, Cal..... 980
Wisconsin & Michigan Railroad..... 855
Wishon, W. W.....818, 1,057
Wisner, A. L., & Co., Cal..... 936
Witmer-Fuller Mine, Cal..... 255
Wittenoom, C. H..... 658
Witwatersrand Mine 533
Wolcott Gold Mg. & Milling Co., Colo.. 579
Wolf Creek Mg. & Developing Co., Ore. 497
Wollard Asbestos Mine, Cal..... 95
Wolverine & Arizona Mg. Co., Ariz.294, 975
Wolverine Mg. Co., Mich..256, 376, 497, 620, 781, 941
Wommack Lease, Mo..... 740
Wonham-Magor Engineering Works..... 738
Woods Gold Mg. Co., Colo....175, 455, 535, 699
Woodside Mine, Utah..... 217
Woods Placer Co., Mont..... 700
Woodward Iron Co., Ala..704, 898, 902, 944
Wooley Placer Mine, Cal..... 295
Worcester Polytechnic Institute..... 533
Worden Quicksilver Mine, Cal..... 698
World Beater Mine, Cal.....375, 454, 899
World's Fair Mine, Ariz.....36, 578
Worthington, Henry R., N. Y.....254, 659
W. P. H. Mine, Colo.....136, 218, 296, 1,021
Wright & Fletcher Mine, Cal..... 699
Wright, George A.....172, 1,018
Wright, J. I..... 658
Wright, Whitaker 173, 252
Wulffsohn Bay Coal Discovery..... 977
Wyandot Mining Co., Mich..... 537
Wyckoff, Ernest L..... 453
Wylie Creek Dredge..... 657
Wyoming Mine, Cal..... 174
Wyoming Mine, Idaho..... 661

X

X-Ray Mine, Idaho..... 580

Y

Yahk River District, Idaho..... 981
Yak Mg., Milling & Tunnel Co., Colo.. 136, 375, 536, 699, 739
Yale-Brown Mines Co., Colo..... 455
Yale Mg. Co., B. C..... 977
Yale & Towne Mfg. Co., N. Y..... 213
Yampa Sm. Co., Utah.....48, 418, 983
Yankee Boy Mine, Colo..... 415
Yankee Con. Mg. Co., Utah.....97, 538
Yankee Con. Mg., Milling & Transportation Co., Colo.....739, 900
Yankee Hill Mine, Cal..... 375
Yaqui Copper Co., Mex..... 138
Yaqui River Sm. & Refg. Co., Mex.332, 856
Yates, John 533
Yates Mine, Minn..... 861
Yawger-Lexow Co., N. Y..... 254
Yellow Aster Mg. & Milling Co., Cal.. 134, 819, 939. 1,020
Yellow Boy Mg. Co., Idaho..... 735
Yellow King Mg. Co., Cal..... 535
Yellow Mountain Mines Co., Colo..... 860
Yellow Rose of Texas Mine, Cal...214, 375
Yellowstone Mine, Cal..... 980
Yerkes Gold Mg. & Milling Co., Mex... 452
Ymir Mine, B. C.....138, 776, 936
Young, J. Dunraven..... 91
Young, Nestor A..... 293
Yreka Mg. & Milling Co., Cal.....295, 980
Yuba County, Cal., vs. Kate Hayes Mg. Co. 92
Yuba County Dredging, Cal..... 775
Yuba-Nevada Mg. Co., Cal..... 899
Yuba River Dredging Ground Sales, Cal. 132
Yukon Crude Oil Co. vs. Henry F. Bulwer 656
Yukon, Hydraulic Mining Regulations.. 371
Yukon Mine, Wash..... 338
Yukon, Mining 371
Yukon, Navigation Opening..... 898
Yukon, Water Supply..... 491
Yuljilkar Quicksilver Mine..... 657

Z

Zailou Phosphate Co., Algeria..... 461
Zala M. Mine, Utah..... 663
Zala M. Mine, Wash..98, 137, 259, 338, 418
Zancudo Mines, Colombia..... 492
Zeehan Tin Discovery, Tasmania..... 252
Zeeland Mine, Tasmania..... 617
Zeibright Mine, Cal.....899, 980
Zella Mg. Co., Cal..... 619
Zenda Mine, Cal..... 495
Zenith Furnace Co.....855, 975
Zenobia Mine, Colo..... 376
Ziegler, W..... 453
Zinc Mining, Pennsylvania..... 497
Zubiate Mg. Co., Mex..... 532